APPENDIX 1

CDM

Technical Memorandum

To: *Virginia Municipal Stormwater Association (VAMSA)*
Christopher D. Pomeroy, Esq., AquaLaw PLC

From: *David Mason, P.E., D.WRE*
Christopher W. Tabor, P.E.

Date: *October 12, 2010*

Subject: *Stormwater Retrofit Cost Estimate Case Study*

As EPA and the Commonwealth of Virginia develop their Chesapeake Bay TMDL and Watershed Implementation Plan (WIP), respectively, to address pollutant concerns in the Chesapeake Bay, a consideration of the potential cost impacts related to stormwater for localities and their citizens is appropriate but has generally been omitted to date. This memorandum summarizes approaches to attempt to estimate the cost for implementation of stormwater retrofits to comply with the EPA Draft TMDL for the Chesapeake Bay (September 24, 2010). It should be noted that site specific conditions, technologies, and local regulations may affect the application of this cost analysis. Therefore, a variety of methods and associated range of costs is provided for consideration and planning purposes. Using these methods described below, EPA's Draft Bay TMDL is estimated to have an Annual Per Household Cost Impact in the range of $678 per year per household initially up to a potential maximum impact of $1,717 per year per household in 2025.

1.0 Calculation Methodology

As the TMDL is in "draft" form and errors/unknowns in the Bay model and input data may exist, this technical memorandum estimates the cost impacts using a variety of methods in an effort to provide a range of costs. The following sections summarize the assumptions used for each calculation method:

Method 1 - Analysis of Cost by Treated Acres

The first method used to estimate the stormwater retrofit/treatment cost involves the application of unit costs (based on treated area) to specific areas as defined by Virginia and EPA within the draft Virginia WIP and draft EPA TMDL. The following subsections describe the cost evaluation and estimate of treatment area:

Unit Cost Assumptions

A literature search was performed to determine estimated costs for pollutant reduction. One of the most common costs listed for the subject matter includes the cost to treat a unit of area (e.g, per acre, etc). It is anticipated that high-efficiency, BMP retrofits will be required to meet the reduction goals set forth by the State and EPA in the respective documents. The Center for Watershed Protection (2007) reports an average construction cost of approximately $88,000 per impervious acre (or, approximately $90,000 in 2010 dollars) to treat for pollutant removal using higher efficiency BMPs. Treatment of pervious land is less costly and has been estimated to be approximately $4,100 per pervious acre (2010 dollars). These costs can be applied to the treatment area in any locality to determine a planning level cost for pollutant reduction.

It has been assumed that full delivery cost is approximately 50% higher to account for engineering, design, permitting and contingency of such projects, bringing the cost to approximately $135,000 per impervious acre and $6,150 per pervious acre (each in 2010 dollars).

Treatment Area Determination

The draft TMDL released by EPA proposes aggressive performance standards to meet the urban stormwater load reduction targets. Page 9 of the Executive Summary of the Draft Chesapeake Bay TMDL summarizes the assumptions related to nutrient reduction in MS4 areas, including proposed treatment for 50 percent of urban MS4 lands through retrofit/ redevelopment and treatment for 50 percent of unregulated land treated as regulated (thus suggesting a 25 percent treatment of unregulated land). Based on a review of the model, "regulated lands" are noted as a combination of "high intensity impervious", "high intensity pervious" and "combined sewer system" areas. "Non-regulated lands" are a combination of "low intensity impervious" and "low intensity pervious." It is stated that these assumptions are the basis of an E3 scenario, which has been defined as "everything, everywhere by everyone."

The latest available model runs from EPA dated 09/17/10 list the total acres assumed for each locality. For this case study, the City of Lynchburg areas were used to represent a typical community in Virginia. Table 1 summarizes the urban acres for Lynchburg.

Table 1 – Urban Land Use Breakdown for Lynchburg

Land Use	Designation	Urban Acres	% Treated	Treated Acres
High Intensity Impervious	Regulated	1,645	50%	823
Low Intensity Impervious	Unregulated	0	25%	0
Combined Sewer System	Regulated	3,526	50%	1,763
High Intensity Pervious	Regulated	7,208	50%	3,604
Low Intensity Pervious	Unregulated	752	25%	188
Total		**13,131**	**n/a**	**6,378**

The unit cost factors previously provided were applied to each respective land use category (impervious or pervious). For the Combined Sewer System area, a breakdown of the percentage of pervious and impervious is not provided. CDM assumed an equal split of the two areas for cost determination. Refer to Section 2.0 for the cost summary.

Method 2 – Analysis of Cost by Pollutant Reduction

A second method for used to estimate the stormwater retrofit/treatment cost is an evaluation of the cost to remove a unit weight or volume of a pollutant. The following sections summarize the assumptions used to generate a retrofit cost for this method.

Unit Cost Assumptions

Total nitrogen (TN) and/or total phosphorus (TP) are significant pollutants of concern for the Bay. The unit costs are typically reported in dollars ($) per pound removed. Similar to the first method, research and literature shows varying levels of cost for pollutant reduction. Documented costs for completed retrofit projects designed to specifically treat nutrients were compiled to form the basis for this method. The State of Florida Department of Environmental Projection (FDEP) tracks the pollutant removal costs of all projects the receive State Revolving Loan funds. The State has summarized the costs for over 40 projects at the link provided herein: http://www.dep.state.fl.us/water/watersheds/docs/tmdl-grant-nutrient-costs-0210.pdf.

For the purposes of this work, the following assumptions were made regarding the FDEP data:

- TN removal was assumed to require the greatest level of effort, and was used as the basis for calculating nutrient removal costs.
- Of the 40 data points in the table, the top and bottom 10th percentile values were screened out in order to remove the potential for outlier data points.

- To account for the potential difference in cost when comparing BMPs in Florida soils versus soils in Virginia, only the top half of the remaining data points were used to compute average cost values.
- The average cost for TN removal is $8,036 lb/yr.
- Since the FDEP costs consider full design and implementation, no premium was added to these values.

Pollutant Removal Determination

The Chesapeake Bay TMDL model run output spreadsheets include both baseline (assumed 2009 Progress) and target load allocations for individual municipalities. The most recent E3-based load allocations can be found in the model run dated September 17, 2010. Table 3 summarizes total nitrogen baseline loadings and E3 target load reductions for Lynchburg.

Table 3 – Target TN Load Reductions for E3-based Scenario

Baseline Loadings (lbs/yr)	Edge of Stream TN(lbs/yr)
Impervious	20,607
Pervious	73,932
Total	**94,539**
Reduction (Lbs/yr)	**Edge of Stream TN (lbs/yr)**
Impervious	8,379
Pervious	32,227
Total	**40,606**
Reduction (%)	**Edge of Stream TN (% removal)**
Impervious	40.7%
Pervious	43.6%
Total	**43.0%**

The estimated cost on a pounds per year basis defined above for TN was applied to the TN reduction target in Table 3 to estimate the total retrofit cost for TMDL compliance. The cost for this method is reported in Section 2.0 in comparison to the other calculation methods described herein.

Method 3 – Analysis of Cost by BMP Implementation

The third method used to estimate the stormwater retrofit/treatment cost is based on the potential number of BMPs required to achieve the required pollutant load reductions. The following sections summarize the BMP cost analysis and application of BMPs to Lynchburg.

Unit Cost Assumptions

For the third method of this work, it was assumed that traditional stormwater wet ponds would be used to provide the treatment necessary for the target nitrogen load reduction. Wet ponds are the most common and least cost BMP for treating nutrients in any soil condition, and our estimated cost represents a baseline planning level cost. Actual implementation depends on watershed, locality, site specific conditions and could be higher than these planning level costs if other types of BMPs are needed due to constraints.

It was assumed that semi-regional ponds would be installed as retrofits and serve 25-acres each. Wossink and Hunt (2003) provide standard equations for determining the construction cost of typical BMPs based on area treated. For a stormwater wet pond, the following equation was used to estimate the total construction cost:

$$\text{Cost (in 2003 dollars)} = 13{,}909 \times DA^{0.672}, \text{ where DA = drainage area in acres}$$

The cost was computed in 2010 dollars using an annual inflation rate of 4%. In addition, literature suggests that the cost for a retrofit BMP versus a new BMP ranges from 1.5 to 4 times the new construction cost. Therefore, a factor of two was applied to the cost calculated in 2010 dollars. Finally, the standard factor of 50% was applied to account for design, engineering, permitting and contingency cost. The estimated cost (in 2010 dollars) to construct a retrofit, stormwater wet pond that treats 25 acres is $477,000.

Wet Pond Implementation Determination

Per the previous section, 40,606 lbs/yr is the targeted load reduction necessary to meet the E3-based scenario for Lynchburg. Several assumptions are required in order to determine the total number of wet ponds necessary to achieve the targeted load reductions. The following list describes these assumptions:

- Based on a review of the model runs, the "No Action" pollutant loading rate for TN is assumed to be approximately 10 lbs/ac/yr.
- If the pond is assumed to treat 25 acres, then the pollutant load delivered to each pond is 250 lbs/yr.
- Supporting documentation for the model input states that wet detention ponds have a removal efficiency of 20 percent. When applied to the 250 lbs/yr, each wet pond serving 25 acres can remove approximately 50 lbs/yr of TN.

- If a reduction of 40,606 lbs/yr is the target, then approximately 810 wet detention ponds are required to achieve the total reductions.

The total number of ponds required to meet the reduction goals can be multiplied by the cost per wet pond defined above to calculate the total cost of BMP implementation. This cost will be defined and compared to the two previous methods in the Section 2.0.

It should be noted that 810 wet detention ponds would treat approximately 20,250 acres (810 x 25 acres/pond). While Table 1 shows only the urban acres at 13,131 acres, the total acreage for Lynchburg is 32,000 so this method is feasible in theory. However, further evaluation on land availability and acquisition opportunities would have to be performed at the local level to determine the true cost of implementation.

2.0 Total Cost Comparison

As a case study, the three calculation methods above were applied to Lynchburg data that resides in the Chesapeake Bay TMDL model. These multiple approaches were attempted to validate that the process was sound and has the potential to be applied elsewhere within the State. Table 4 presents a summary of the estimated total construction cost (including design, engineering and permitting considerations) to achieve the targeted loads listed in the model runs for Lynchburg. Ongoing operation and maintenance (O&M) cost of the new BMP facilities should also be considered. For this, a standard literature value of five percent of the capital construction costs is used to estimate annual O&M costs, which is then totaled for the 15 year planning period assumed for Bay TMDL compliance. The total O&M cost for the 15-year period is also provided in Table 4.

Table 4 – Planning Level Estimate of BMP Retrofit Costs for Lynchburg, VA based on EPA Draft Chesapeake Bay TMDL (in 2010 dollars)

Method	Total Capital ($)	Total O&M ($)	Total Cost ($)
1 – Cost By Treated Acres	$ 259,000,000	$ 91,000,000	$ 350,000,000
2 – Cost By Pollutant Reduction	$ 326,000,000	$ 114,000,000	$ 440,000,000
3 – Cost by BMP Implementation	$ 386,000,000	$ 135,000,000	$ 521,000,000

Based on the assumptions provided herein, the range of total capital costs for Lynchburg is approximately $259 million to $386 million for full implementation of BMP retrofits through 2025 (15-year planning period).

It is important to note that the capital costs indicated do **not** include master planning costs and any costs/fees associated with land acquisition, land attainment, transfer of land

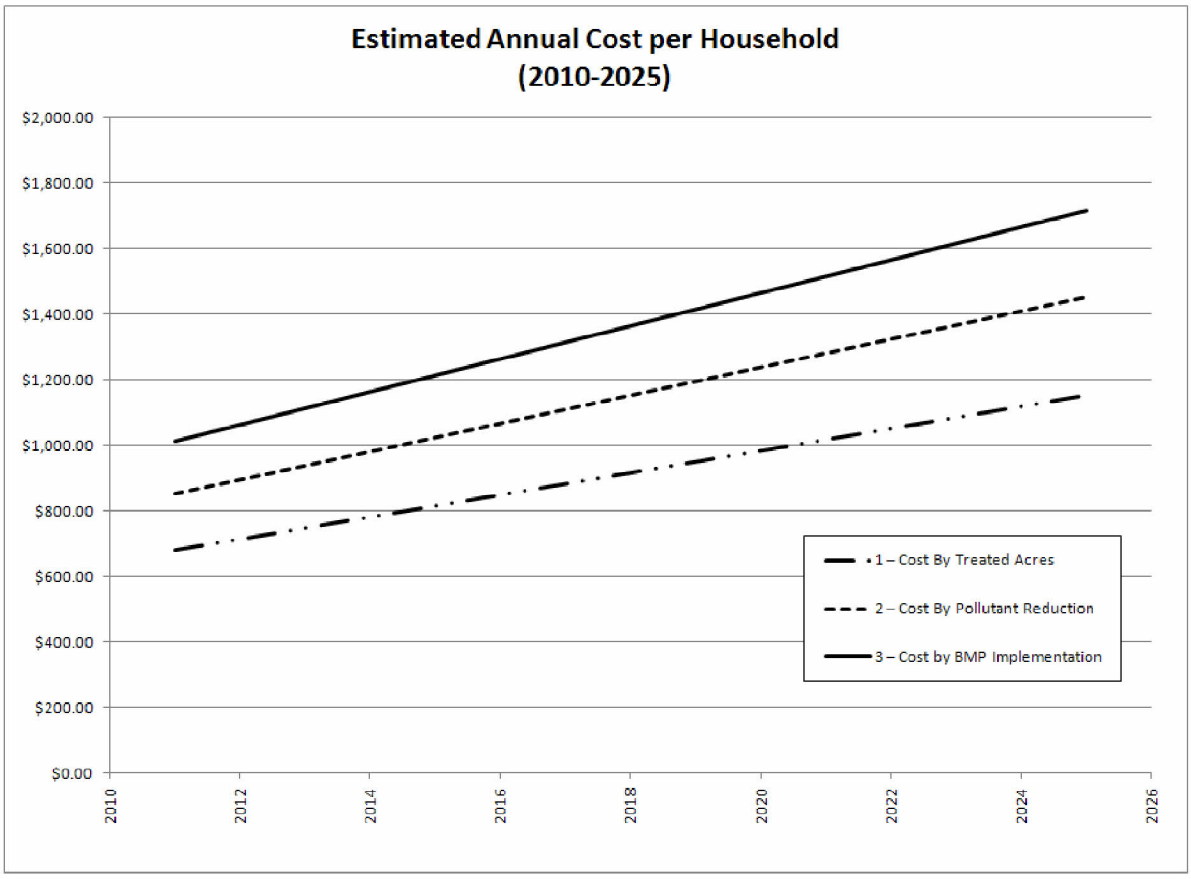
ownership, etc. associated with wide implementation of various BMPs across the locality. Therefore, land costs (such as acquisition costs for some or all of the 810 wet pond sites) would increase the capital costs presented herein.

It should also be noted that capital costs on this order of magnitude would typically be bonded and the debt service paid over time, so the financial burden shown in the table above should not be interpreted as requiring upfront lump sum investment. Section 3.0 graphically depicts a possible scenario that Lynchburg may experience on an annual basis.

3.0 Estimated Cost per Household/Person Annually

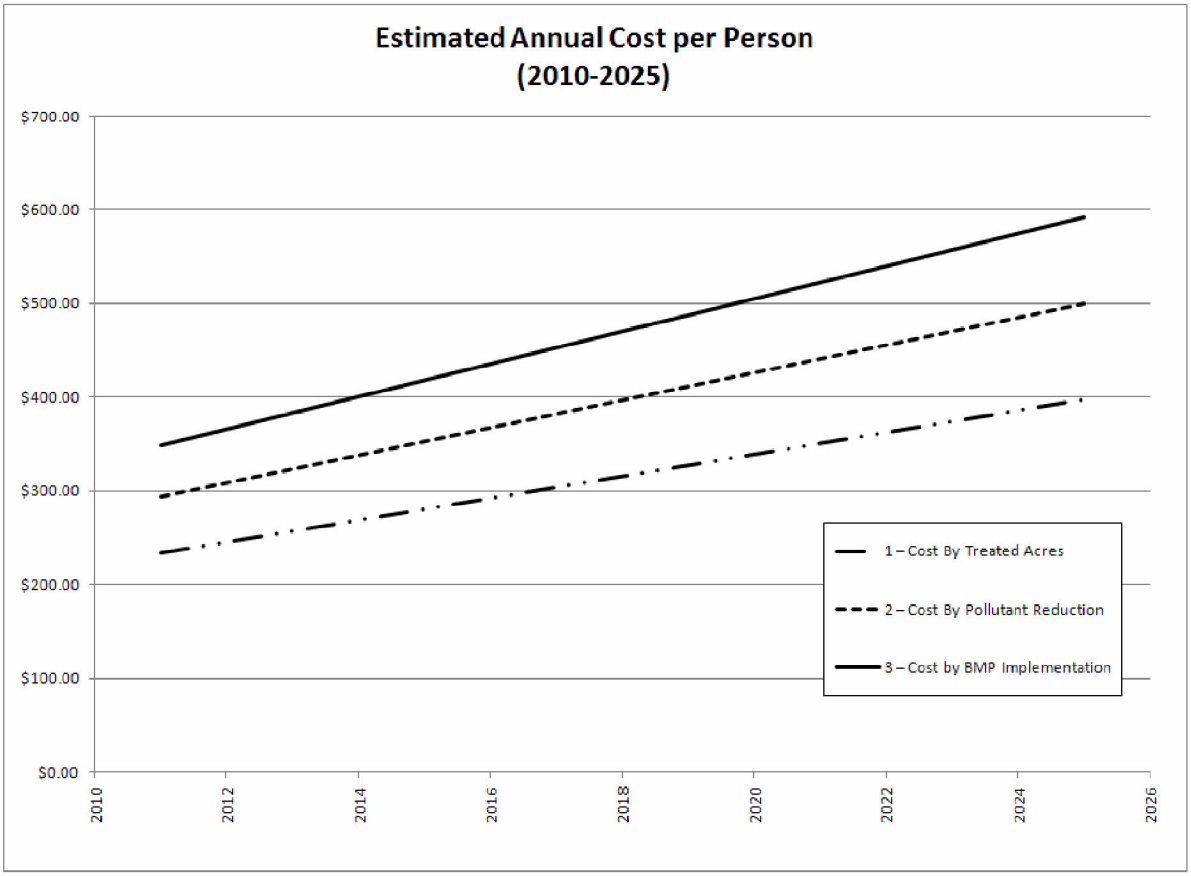
As a final evaluation in this case study, CDM estimated the potential cost on a household basis and a per person basis for the City of Lynchburg based on 2009-2010 US Census Bureau data (73,933 population and 25,477 households). The following charts assume that capital costs for BMP implementation are normalized each year and that over time O&M costs will increase per year due to more BMPs being in service each year. In summary, costs per household per year range from a low of $678/year initially up to a potential maximum of $1,717/year in 2025 depending on the methodology used and the annual O&M costs.

Chart 1 –Estimated Annual Cost per Household (2010 dollars)



When evaluating the cost by population, the costs per person per year range from a low of $234/year initially to a potential maximum of $592/year in 2025 depending on the methodology used and the annual O&M costs.

Chart 2 –Estimated Annual Cost per Person (2010 dollars)



Range of Estimated Costs for Virginia Urban Runoff (Stormwater)

Category	Row	Item	TMDL 50% Retrofit Assumption on Regulated Stormwater		Reductions to Meet TMDL WLA
			Scenario 1a: All BMPs ($/yr)	Scenario 2a: Fewer BMPs & Storage ($/yr)	Scenario 2b:[1] Fewer BMPs & Storage ($/yr)
Estimated Costs	A	Estimated Capital Cost (Millions)	$15,776	$20,306	$39,438
	B	Estimated Annual Cost (Millions per year)	$1,692	$2,178	$4,230
Estimated Average Annual Stormwater Bills	C	Residential House ($/yr)	$450	$520	$1,200
	D	Convenience Store/ Gas Station ($/yr)	$4,100	$4,700	$11,100
	E	Neighborhood Shopping Center ($/yr)	$27,000	$31,700	$73,800
	F	Church ($/yr)	$9,000	$10,600	$24,600
	G	Regional Mall ($/yr)	$408,000	$478,600	$1,115,400
Census Households & Population	H	2009 Household Estimate (in Chesapeake Bay Watershed)	2,663,652	2,663,652	2,663,652
	I	2009 Population Estimate (in Chesapeake Bay Watershed)	6,881,351	6,881,351	6,881,351
	J	Total Annual Fee Per Household[2] ($/yr) (Row "B" / Row "H")	$640	$820	$1,590
	K	Total Annual Fee Per Person[2] ($/yr) (Row "B" / Row "I")	$250	$320	$610
Financial Burden	L	2009 Medium Household Income Estimate	$59,985	$59,985	$59,985
	M	Residential House Stormwater Fee as Percentage of MHI (Row "C" / Row "L")	0.8%	0.9%	2.0%
	N	Total Household Stormwater Fee[2] as Percentage of MHI (Row "J" / Row "L")	1.1%	1.4%	2.7%
Note:	(1)	Does not include performance of urban nutrient management			
	(2)	Simulates stormwater costs passed on to consumer by retail stores, gas stations, etc.			

Three control scenarios were evaluated to arrive at this cost estimate: (1) Scenario 1a - all best management practices with urban nutrient management on all pervious areas; (2) Scenario 1b – assumes urban nutrient management plans on all pervious areas with fewer BMPs and substituting storage; and (3) Scenario 1c – included no nutrient management and applied BMPs that may be reasonably installed and included storage required to meet the Urban Runoff allocations.

APPENDIX 2


Chesapeake Bay
Water Quality Big Picture
April 20-21, 2009 PSC Meeting
Bob Koroncai
U.S. EPA Region 3
Water Protection Division

EPA's Draft Bay TMDL Framework

- States' existing Chesapeake Bay water quality standards (WQS) should not be relaxed based on feasibility
- Bay TMDLs must contain the load allocations and the waste load allocations necessary to achieve the states' existing Chesapeake Bay WQS
- State Implementation Plans will be written to achieve the loadings assigned in the Bay TMDLs
  - Staged implementation is a possible option
- Wastewater discharge load requirements will continue to be set at the discretion of states
- An affordability assessment will be completed

APPENDIX 3

Maryland

Virginia

November 25, 2009

The Honorable Barack Obama
President of the United States
The White House
1600 Pennsylvania Avenue, NW
Washington, DC, 20500

Dear Mr. President:

As you prepare your Fiscal 2011 budget, we urge you to make restoration of the Chesapeake Bay and its tributaries a top priority and allocate sufficient resources to begin carrying out the water quality, landscape conservation, habitat restoration, and other initiatives called for under Executive Order #13508.

We are grateful for your leadership in issuing the first-ever Executive Order on the Chesapeake Bay watershed, renewing the federal government's commitment to help to restore and protect our national treasure. Over the past six months since the Order was first issued, our states and the District of Columbia have worked closely with the Federal Leadership Committee to develop a coordinated strategy and action plan to accelerate restoration of the Bay, its rivers, and streams.

Implementing that strategy and plan will require a significant investment in resources to reduce polluted runoff from farms and urban and suburban stormwater, upgrade sewage treatment plants, conserve natural places, restore fish and wildlife habitat, and increase local government and citizen stewardship in the protection of local waterways. It is estimated that the cost of upgrading the Blue Plains sewage treatment plant alone is approximately $3.2 billion over the next 10 years. Federal assistance is absolutely essential if our efforts to fully restore the health of the Bay are to succeed. A review of the seven reports produced under Executive Order #13508 yield conservative estimates as to the following annual funding needs for the Chesapeake Bay Watershed:

- $60 million for land conservation and public access;
- $100 million for technical and conservation assistance to agricultural sectors;
- $40 million for habitat and fish and wildlife restoration, including oysters;
- $10 million for climate change preparedness and adaptation;
- $100 million for stormwater controls and stream restoration;
- $5 million for monitoring and accountability activities; and
- $50 million for upgrades to the Blue Plains sewage treatment plant.

We recognize that the federal government, like our State and local governments, faces very difficult budget constraints. However, we believe that a federal investment of $365 million in a restored Chesapeake Bay, similar in magnitude to the level of federal investments being made in restoring the Everglades, the Great Lakes, and other natural treasures would return enormous dividends to both the economy and the environment. Alternatively, without help, the Bay will continue to face stagnating or deteriorating ecological conditions, decreasing economic value, and increasing restoration costs.

Your attention to this matter and assistance would be greatly appreciated, and we stand ready and anxious to collaborate with you, your staff and Cabinet, and our colleagues in the Congress as the budget and subsequent appropriations processes develop.

Sincerely,

Governor Martin O'Malley
Maryland

Governor Timothy M. Kaine
Virginia

cc: The Maryland Congressional Delegation
The Virginia Congressional Delegation

APPENDIX 4

COMMONWEALTH of VIRGINIA
Office of the Governor

Robert F. McDonnell
Governor

June 15, 2010

The Honorable Lisa P. Jackson, Administrator
United States Environmental Protection Agency
Ariel Rios Building – Mail Code: 1101 A, Room 3000
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

RE: Virginia's Concerns with the Chesapeake Bay TMDL Process

Dear Administrator Jackson:

I found the opportunity to attend my first annual meeting of the Chesapeake Bay Executive Council a valuable experience in working together with other Bay state leaders to restore and maintain the Chesapeake Bay, a true national treasure. I am sorry that other, and certainly more pressing, matters prevented your attendance. I look forward to the continued close cooperation with Council members during the coming years.

I am committed to improving Virginia's efforts to restore the Chesapeake Bay. It is one of my top environmental commitments along with the conservation of 400,000 additional acres of land much of which is in the Bay watershed. I can assure you that Virginia will work diligently to set and achieve appropriate milestones in the restoration of the Bay. We must ensure that continued progress is maintained in improving the water quality of the Bay as we develop the Total Maximum Daily Load (TMDL) for the Chesapeake Bay and its tidal rivers. A strong basis of this effort will be to establish a shared commitment with Virginia's stakeholders based on sound science and reasonable goals.

This brings me to the main purpose of this letter.

At the Executive Council meeting I spoke briefly with Deputy Administrator Bob Perciasciepe, and shared with him some concerns about the on-going TMDL development process. Of paramount importance is the perceived lack of transparency to the stakeholders as evidenced by the short time frames and opportunities for public review and comment by the very citizens and affected constituencies who will be responsible for reducing nutrient and sediment pollution to the Bay. I am also troubled by the continually changing pollution reduction goals as

Patrick Henry Building • 1111 East Broad Street • Richmond, Virginia 23219
(804) 786-2211 • TTY (800) 828-1120
www.governor.virginia.gov

modifications are made to the Bay model, and want to be sure we have sound science supporting the requirements being imposed on the states.

Outlined below are my key concerns with the TMDL development process:

- **TMDL Deadlines** – Despite significant delays in providing promised data to the states, EPA is holding firm to the December 2010 deadline for the TMDL and state Watershed Implementation Plans (WIP's). Virginia has worked diligently over the past decade with EPA to develop TMDLs in accordance with the schedule contained in the June 1999 federal court consent decree which requires EPA to have final numbers by May 2011. We remain disappointed that EPA is not utilizing the available time allowed under the consent decree to better ensure this highly complex TMDL is technically sound, and the citizens of Virginia are provided sufficient time to both understand the implications of the TMDL on their lives and offer constructive comment.

- **TMDL "Reasonable Assurance" Not Defined by EPA** – The states are being compelled by EPA to provide reasonable assurance that the nutrient loadings are achieved. However, EPA has failed in two efforts to adopt a regulation that would officially define how that standard can be met. This places the states in an untenable position of developing WIR's without knowing how this standard may be met. This is particularly troublesome given EPA's newly developed accountability system and list of consequences that can be imposed on the states if they do not meet an undefined standard. It is a mandate we are being required to enforce without adequate standards to hold regulants accountable. In essence, neither the enforcer nor regulant knows precisely what is required of them.

- **Transparency with Public** – In spite of numerous Bay Program meetings, the current process does not result in proper communication to the states, stakeholders and citizens of how key decisions are being made. Improved documentation is needed to explain the basis for decisions, and these decisions need to be peer reviewed so the public confidence is sufficient to support the decisions.

- **Public Comment Process** – EPA expects to provide, at most, 45 days for the public to provide comments on the TMDL and WIPs. Given the complexity of these materials and the magnitude of the costs involved and other potential impacts, this time period is inadequate. In addition, EPA expects to review the anticipated extensive public comment, and make appropriate adjustments in response to this comment, within 60 days. Given our experience with highly complex regulatory issues, these timeframes only communicate to the public that their input will not be considered in any reasonable way.

- **Model Elements Are Flawed** – EPA acknowledge the model version being used for the 2010 TMDL is flawed since it does not properly account for common pollution reduction

practices employed by the states and does not accurately reflect levels of impervious surface. These current shortcomings are undermining the confidence the public and stakeholders will have in the Watershed Implementation Plans developed by the states. In addition, EPA is applying the results of the water quality model in a manner that many believe overestimates the precision of the model. This approach is resulting in much lower nutrient loading caps that are not justified by the resulting high costs and disruption to society.

- **James River is Unique** – It has long been known that the James River has a relatively minimal impact on the water quality problems of the Bay. The assignment of nutrient loading caps by EPA for the James should reflect this minimal impact. However, there are nutrient related problems within the tidal James River. Therefore in 2005, Virginia, EPA and stakeholders agreed upon a solution to address those problems, resulting in adoption of unique chlorophyll standards for the James estuary. Recent EPA modeling is threatening to undermine the basis for those unique standards and the progress being achieved in cleaning the river. The agreed upon solution should remain intact under the Bay TMDLs EPA is developing. However, if EPA believes the 2005 solution needs to be revisited, then Virginia should retain its entitlement under the Clean Water Act to develop a James River TMDL for this issue under a reasonable schedule.

- **Unfairness of EPA Consequences** -- EPA threatens to impose harsh consequences on certain source sectors if other sectors are falling behind, such as removing allocation from wastewater treatment plants or making development more expensive if unregulated agricultural sources do not achieve expected reductions. This appears to violate fundamental principles of fairness. Any regulatory consequences need to be targeted to the source sector lagging behind, and not on others that are working diligently to keep in compliance with state and federal mandates.

- **Funding** – Given current economic conditions, federal funding sources will need to dramatically increase to address additional federal responsibilities required of the states. Doing this without further increasing the federal deficit could be problematic.

- **Federal Executive Order** – Some states are concerned that elements of the President's Chesapeake Bay Executive Order will mandate additional work by the states for activities that should be the responsibility of federal agencies. For instance, EPA is creating a new tracking system which will call for local governments to track voluntary practices over a 64,000 square mile area. This can represent a significant effort and is simply another reporting system layered on top of those that already exist. It may also divert federal resources from our primary water quality objectives.

- **Use of Offsets** – Clear direction from the EPA is needed regarding the use of offsets in achieving reductions, particularly those associated with Virginia's Stormwater Construction General Permit.

- **Federal Reduction Commitments by Jurisdiction** – Federal agencies are ramping up reduction activities on federal lands and in some cases such as the Natural Resources Conservation Service (NRCS) have been receiving significantly more funding. In a four year period, NRCS will implement agricultural BMPs through the EQIP program with an additional $43 million targeted to the Chesapeake Bay watershed within Virginia. EPA needs to be coordinating federal reduction activities and commitments and then crediting that reduction against the goals set for each jurisdiction.

- **EPA Enforcement Measures in the Valley of Virginia** – On June 3, 2010, EPA issued orders for two farms in the Shenandoah Valley to cease and desist discharge and pollutants into local waterways. We understand that EPA has also taken the unprecedented step of expanding the definition of point source pollution to include common agricultural practices. Many are very concerned that this is an over reach of EPA's authority. We believe the EPA's time and energy would be better spent in Virginia educating farmers on best practices and positive actions they should be undertaking to help restore the Chesapeake Bay, rather than expanding the scope of its regulatory authority through enforcement measures. We were delighted to learn at the annual meeting that USDA will soon release a report of agricultural BMPs that are working around the country.

I hope that you will give serious consideration to these issues. It is not too late for mid-course corrections that would result in a fairer outcome for the states and a better bay clean up program.

Sincerely,

Robert F. McDonnell

RFM/dd
cc: Virginia Congressional Delegation
The Honorable Patricia Smith Ticer
The Honorable Harvey B. Morgan
The Honorable Kenneth T. Cuccinelli
The Honorable Martin L. Kent
The Honorable Douglas W. Domenech
The Honorable Todd P. Haymore

APPENDIX 5

MALCOLM PIRNIE

Technical Memorandum

Date: October 19, 2010

To: Virginia Association of Municipal Wastewater Agencies

From: Clifton F. Bell, Malcolm Pirnie, Inc.

Re: Screening-Level Analysis of Nutrient and Sediment Control Options: York River Basin Demonstration

ABSTRACT

A screening-level analysis was performed to explore the sensitivity of costs, cost-effectiveness, and other ancillary environmental benefits to the nutrient and sediment reduction practices selected for implementation. The analysis applied the *BMP Benefit Planner* version 1.1 to the York River basin. The default implementation scenario was based on USEPA's draft (September 2010) TMDL scenario, and the alternative scenario was constructed to target more cost-effective nonpoint source practices and maintain regulatory stability for point sources. Results demonstrated that the alternative scenario was only 50% as costly as the default scenario, had 20% lower greenhouse gas emissions, and 19% higher rates of carbon sequestration. The alternative scenario also had higher ratings for various ancillary environmental benefit categories, including wildlife habitat and in-stream habitat protection.

INTRODUCTION

It is well established that best management practices (BMPs) intended to reduce nutrient and sediment loads have other environmental effects that can be positive or negative with regard to ecosystem services and overall sustainability. Some BMPs provide net benefits to greenhouse gas (GHG) emissions, carbon sequestration, wildlife habitat, *etc.* whereas other practices are neutral or even cause net detriments in these regards. Similarly, BMPs vary greatly in their cost-effectiveness; *i.e.*, pollutant mass reduced per dollar invested.

The purpose of this memo is to present a screening-level demonstration of how cost-effectiveness and ancillary environmental benefits of a watershed implementation plan can be improved by careful selection of the type and amount of BMPs. The York River Basin in Virginia was used as a case study, with the default BMP implementation scenario approximately represented by the watershed model input deck associated with USEPA's September 2010 draft total maximum daily load (TMDL) (USEPA, 2010). The *BMP Benefit Planner* version 1.1 (Malcolm Pirnie, 2010) was used explore how the overall costs and benefits of the default scenario might be improved by targeting cost-effective practices.

METHODS

The *BMP Benefit Planner* is a Microsoft® Excel®-based model for comparing watershed implementation plans with respect to environmental sustainability and cost-effectiveness. The user input is the extent (acreage, linear feet, million gallons per day, *etc.*) of various management practices for reducing nutrient and/or sediment loads, including wastewater treatment plant nutrient removal upgrades, forestry practices, agricultural practices, and urban stormwater retrofits. It estimates the costs, greenhouse gas emissions, and carbon sequestration associated with these practices. The *BMP Benefit Planner* utilizes many default BMP efficiency and cost factors derived from USEPA references and the scientific literature, as documented by Malcolm Pirnie (2010).

The *BMP Benefit Planner* uses a semi-quantitative approach to compare scenarios with respect to other ecosystem services such as wildlife habitat, flood hazard risk, and public health protection. Ancillary benefit scores of individual practices reflect the effectiveness of each practice to specific benefit categories, and the extent of that practice relative to the watershed size. Ancillary benefit scores for all BMPs are summed to provide a total score for each ancillary benefit category for each scenario. Due to the semi-quantitative nature of this method, results are used only to compare scenarios rather than to determine the absolute value of ecosystem services for an individual scenario.

Default (Draft TMDL) Scenario

Information on the extent of nonpoint source BMPs for the draft TMDL scenario was obtained from the Chesapeake Bay Program ftp site (ftp://ftp.chesapeakebay.net/Modeling/phase5/), and specifically from the file entitled "bmpacres_2010EPA19N091710.csv". The land use breakdown of the York River Basin was obtained from the spreadsheet entitled "P53_Loads_Acres_ 2010EPA19N091710.xls" (Table 1). Acreages of land under non-enhanced nutrient management were determined directly from the land-use categories.

The Phase 5.3 watershed model (WSM5.3) includes more BMP varieties than are included in the *BMP Benefit Planner* version 1.1. For the purposes of this screening-level exercise, BMP acreages of the WSM5.3 were aggregated into BMP categories of the *BMP Benefit Planner* as shown in Attachment A. The final *BMP Benefit Planner* input sheets are compiled in Attachment B.

Major municipal point sources were categorized by design flow and the effluent concentration basis (TN = 4 mg/L; TP = 0.3 mg/L) of the "backstop" wasteload allocations of USEPA draft TMDL, and the summed design flows for each flow category were entered into the *BMP Benefit Planner*. Because industrial point source flows were not modified between the default and alternative scenarios, they were not explicitly considered in this exercise.

TABLE 2
Land Use/Cover of the York River Basin

Land Use	Acres	Percent
Open water	27,507	1.4%
Forest (not inc. added forest buffers)	1,573,805	80.1%
Hay/Pasture	161,114	8.2%
Cropland	115,923	5.9%
High intensity manure/CAFO	1,965	0.1%
Ultraurban	9,824	0.5%
Mixed Urban/Suburban	76,627	3.9%
TOTAL	**1,966,765**	**100%**

Alternative Scenario

The alternative scenario was constructed from the default scenario. Major municipal point sources were returned to their existing load allocations based on Virginia's general watershed permit registration list (9 VAC 25-820-70), as a means to provide regulatory stability and provide capacity for future "smart" growth. Because urban stormwater retrofits are among the least cost-effective means to reduce nutrients (Malcolm Pirnie, 2010), the acreages of urban stormwater retrofits were reduced by 50% relative to the default TMDL scenario. The acreages of the remaining BMPs—primarily agricultural practices such as nutrient management, cover crops, conservation tillage, and animal waste management—were increased by 20%. The final acreages of BMPs for both the default and alternative implementation scenarios are provided in Table 2.

TABLE 2
Implementation Rates for the Default and Alternative Scenarios

Practice	Units	Default Scenario	Alternative Scenario	Difference
Municipal WWTP upgrades	mg/L N	18.7 reduced to 4	18.7 reduced to 6	-14%
	mg/L P	2.5 reduced to 0.3	2.5 reduced to 0.7	-18%
Nutrient management plans	acres	80,361	96,433	+20%
Enhanced nut. management plans	acres	137,175	164,610	+20%
Conservation tillage	acres	95,017	114,020	+20%
Cover crops	acres	29,062	34,875	+20%
CAFO-Animal waste management	acres	568	681	+20%
Grazing land management	acres	36,793	44,152	+20%
Riparian buffers – forested (100 ft)	ft	3,032,212	3,638,654	+20%
Riparian buffers – grass (100 ft)	ft	642,728	771,274	+20%
Wetland creation/restoration	acres	882	1,059	+20%
Stormwater retrofits-pervious	acres	24,451	12,225	-50%
Stormwater retrofits-impervious	acres	4,843	2,421	-50%
Stormwater retrofits-ultraurban	acres	12,578	6,289	-50%

The *BMP Benefit Planner* is not a watershed loading or water quality model, and would normally be used in combination with a separate model that quantifies water quality/loading benefits. However, the model includes a simple load calculator based on land use-specific loading factors and default BMP efficiencies (Malcolm Pirnie, 2010), primarily intended for scoping. The load calculator was used for this exercise to ensure that the default and alternative BMP implementation scenarios provided approximately the same level of loading reduction.

RESULTS AND DISCUSSION

The load reductions predicted by the *BMP Benefit Planner*'s load calculator for the default (draft TMDL) and alternative scenarios are presented in Table 3. Although these values are only rudimentary estimates, they are useful for demonstrating that the alternative scenario would accomplish approximately the same or slightly higher levels of nutrient and sediment load reduction, compared to the default scenario. Because the alternative scenario has more WWTP capacity to handle smart growth and prevent septic system sprawl, it might actually have a higher differential in the long-term reduction in nitrogen loads than indicated in Table 3.

TABLE 3
Pollutant Reduction Rates for the Default and Alternative Scenarios

Scenario	TN Load Reduction	TP Load Reduction	TSS Load Reduction
Default	31%	42%	7%
Alternative	33%	43%	9%

Table 4 summarizes the BMP Benefit Planner's comparison of the default and alternative implementation scenarios for the York River Basin. The alternative scenario was estimated to have a total capital, O&M, and annualized cost that is only about 50% of the cost of the default (draft TMDL) scenario. The huge cost reduction was driven primarily by the reduction in stormwater retrofit costs, but also by a significant reduction in WWTP capital and O&M costs. Because the two scenarios are estimated to achieve similar pollutant load reductions, the alternative scenario is also about twice as cost-effective (expressed in dollar spent per lb pollutant reduced) as the default scenario. Costs and cost-effectiveness of individual practices are summarized in Attachment C.

Both the default and alternative scenarios were predicted to cause a net reduction in GHG emissions, and so the GHG emissions are expressed as negative values for both scenarios. However, the alternative scenario was predicted to have much greater reduction (-712%) in emissions of greenhouse gases than the default scenario, primarily due to fewer emissions from wastewater treatment plants and more reductions from land under nutrient management. It was also predicted to have approximately 20% higher carbon sequestration, primarily due to the increases in riparian buffers, cover crops, conservation tillage, and rotational grazing.

The alternative scenario had slightly higher scores in all ancillary benefit categories including wildlife habitat, instream habitat, aesthetics, public health, flood hazard mitigation, and baseflow protection. These higher scores were caused by increased acreages of landscape-enhancing practices such as conservation tillage, riparian buffers, and cover crops. The reductions in WWTP upgrades and stormwater retrofits did not greatly affect the ancillary benefit scores because these practices either do not have high ratings for such benefits or affect only a small proportion of the landscape under the proposed acreages.

TABLE 4
Summary BMP Benefit Planner Results:
Comparison of Scenarios for the York River Basin

Benefit Category	Units	Default Scenario	Alternative Scenario	Difference
Costs				
Capital Cost	Pound $	$2,026,468,409	$1,027,823,507	-49%
O&M Cost	$/yr	$62,579,481	$30,577,153	-51%
Annualized Total Cost	$/yr	$228,443,135	$116,957,873	-49%
Greenhouse Gases				
GHG Emissions	Mg CO2e/yr	-2.29E+03	-1.86E+04	-712%
Carbon Sequestration Rate	Mg CO2e/yr	8.14E+04	9.74E+04	+20
Lifetime C Seques. Potential	Mg CO2e	7.34E+06	8.75E+06	+19
Load Reduction				
Cost per lb N Reduced	$/lb N/yr	$53	$25	-52%
Cost per lb P Reduced	$/lb P/yr	$342	$170	-50%
Cost per lb Sed. Reduced	$/ton/yr	$4,430	$1,994	-55%
Ancillary Benefit Ratings				
Wildlife habitat	--	3.2	3.5	
In-stream (aquatic) habitat	--	7.1	7.3	
Aesthetics	--	2.9	2.9	
Public health	--	4.3	4.7	
Flood hazard mitigation	--	7.5	8.0	
Baseflow protection	--	5.1	5.6	

CONCLUSIONS

This screening-level exercise demonstrates that the overall cost, cost-effectiveness, and environmental benefit of a watershed implementation plan is very sensitive to the mix of practices selected. Total scenario costs tend to be controlled by costly urban stormwater retrofits that achieve only small pollutant reductions at the watershed scale. Implementation scenarios that substitute (or trade) such practices for more widespread landscape-enhancing practices can achieve significantly higher environmental benefits at much lower costs. Similarly, the correct mix of point and nonpoint source practices can

preserve regulatory stability for wastewater treatment plants and preserve treatment capacity for future "smart" growth.

REFERENCES

Malcolm Pirnie. 2010. Best Management Practice Benefit Planner Version 1.1—Technical Documentation and User's Guide. 89 p.

U.S. Environmental Protection Agency—Region 3. 2010. Draft Chesapeake Bay Total Maximum Daily Load. EPA-R03-OW-2010-0736-0026.

ATTACHMENT A
Aggregation of WSM BMP Categories into BMP Benefit Planner BMP Categories

BMP Category Watershed Model Phase 5.3	Area Acres	BMP Category BMP Benefit Planner version 1.1
AWMSLivestock_afo	462	Animal Waste Management
BarnRunoffCont_afo	292	Mixed-Land Use SW Retrofits - Pervious
ComCovCropEDW_hom	25	N/A
ComCovCropEDW_hwm	54	N/A
ComCovCropEDW_lwm	482	N/A
ComCovCropEDW_nhi	1,019	N/A
ComCovCropEDW_nho	471	N/A
ComCovCropEDW_nlo	9,159	N/A
ConPlan_alf	205	NMPs
ConPlan_hom	218	NMPs
ConPlan_hwm	472	NMPs
ConPlan_hyw	2,559	NMPs
ConPlan_lwm	4,240	NMPs
ConPlan_nal	3,902	NMPs
ConPlan_nhi	8,964	NMPs
ConPlan_nho	4,142	NMPs
ConPlan_nhy	48,624	NMPs
ConPlan_nlo	80,568	NMPs
ConPlan_npa	56,318	NMPs
ConPlan_pas	2,920	NMPs
CoverCropEDW_hom	41	Cover Crops
CoverCropEDW_hwm	89	Cover Crops
CoverCropEDW_lwm	803	Cover Crops
CoverCropEDW_nhi	1,698	Cover Crops
CoverCropEDW_nho	785	Cover Crops
CoverCropEDW_nlo	15,265	Cover Crops
CoverCropSDW_hom	23	Cover Crops
CoverCropSDW_hwm	50	Cover Crops
CoverCropSDW_lwm	446	Cover Crops
CoverCropSDW_nhi	944	Cover Crops
CoverCropSDW_nho	436	Cover Crops
CoverCropSDW_nlo	8,481	Cover Crops
DecisionAg_nhi	7,524	NMPs
DecisionAg_nlo	9,196	NMPs
DryPonds_imh	389	Mixed-Land Use SW Retrofits - Impervious

BMP Category Watershed Model Phase 5.3	Area Acres	BMP Category BMP Benefit Planner version 1.1
DryPonds_iml	397	Mixed-Land Use SW Retrofits - Impervious
DryPonds_puh	1,570	Mixed-Land Use SW Retrofits - Pervious
DryPonds_pul	1,775	Mixed-Land Use SW Retrofits - Pervious
EnhancedNM_nal	4,108	ENMPs
EnhancedNM_nhi	1,912	ENMPs
EnhancedNM_nho	4,360	ENMPs
EnhancedNM_nhy	51,183	ENMPs
EnhancedNM_nlo	75,612	ENMPs
ExtDryPonds_imh	248	Mixed-Land Use SW Retrofits - Impervious
ExtDryPonds_iml	150	Mixed-Land Use SW Retrofits - Impervious
ExtDryPonds_puh	829	Mixed-Land Use SW Retrofits - Pervious
ExtDryPonds_pul	657	Mixed-Land Use SW Retrofits - Pervious
Filter_imh	2,110	Mixed-Land Use SW Retrofits - Impervious
Filter_iml	11	Mixed-Land Use SW Retrofits - Impervious
Filter_puh	13,680	Mixed-Land Use SW Retrofits - Pervious
Filter_pul	43	Mixed-Land Use SW Retrofits - Pervious
ForestBuffersN_hom	43	Forrest Buffers
ForestBuffersN_hwm	1,122	Forrest Buffers
ForestBuffersN_hyw	2,110	Forrest Buffers
ForestBuffersN_pas	799	Forrest Buffers
ForestBuffersPS_hom	21	Forrest Buffers
ForestBuffersPS_hwm	1,122	Forrest Buffers
ForestBuffersPS_hyw	1,055	Forrest Buffers
ForestBuffersPS_pas	400	Forrest Buffers
ForestBufferstrpN_npa	27	Forrest Buffers
ForestBufferstrpN_pas	1	Forrest Buffers
ForestBufferstrpPS_npa	14	Forrest Buffers
ForestBufferstrpPS_pas	1	Forrest Buffers
ForestBufUrban_imh	900	Forrest Buffers
ForestBufUrban_iml	370	Forrest Buffers
ForestBufUrban_puh	4,029	Forrest Buffers
ForestBufUrban_pul	1,910	Forrest Buffers
ForHarvestBMP_for	0	N/A
ForHarvestBMP_hvf	14,681	N/A
GrassBuffersN_hom	300	Grass Buffers
GrassBuffersN_hwm	1,122	Grass Buffers
GrassBuffersN_npa	40	Grass Buffers
GrassBuffersN_pas	132	Grass Buffers

BMP Category Watershed Model Phase 5.3	Area Acres	BMP Category BMP Benefit Planner version 1.1
GrassBuffersPS_hom	150	Grass Buffers
GrassBuffersPS_hwm	1,122	Grass Buffers
GrassBuffersPS_npa	20	Grass Buffers
GrassBuffersPS_pas	66	Grass Buffers
InfiltWithSV_imh	1,627	Ultra-Urban SW Retrofits
InfiltWithSV_iml	5	Ultra-Urban SW Retrofits
InfiltWithSV_puh	10,929	Ultra-Urban SW Retrofits
InfiltWithSV_pul	17	Ultra-Urban SW Retrofits
MortalityComp_afo	11	
PrecRotGrazing_npa	36,793	Rotational Grazing
UrbanNutMan_puh	47,018	NMPs
UrbanNutMan_pul	24,953	NMPs
WaterContStruc_hwm	105	Animal Waste Management
WetlandRestore_alf	0	Wetland Creation - Freshwater Mineral Soil - Conv Tillage
WetlandRestore_hom	21	Wetland Creation - Freshwater Mineral Soil - Conv Tillage
WetlandRestore_hwm	590	Wetland Creation - Freshwater Mineral Soil - Conv Tillage
WetlandRestore_hyw	31	Wetland Creation - Freshwater Mineral Soil - Conv Tillage
WetlandRestore_lwm	118	Wetland Creation - Freshwater Mineral Soil - Conv Tillage
WetlandRestore_pas	123	Wetland Creation - Freshwater Mineral Soil - Pasture
WetPondWetland_imh	875	Mixed-Land Use SW Retrofits - Impervious
WetPondWetland_iml	663	Mixed-Land Use SW Retrofits - Impervious
WetPondWetland_puh	3,001	Mixed-Land Use SW Retrofits - Pervious
WetPondWetland_pul	2,603	Mixed-Land Use SW Retrofits - Pervious
	590,950	

ATTACHEMENT B
***BMP Benefit Planner* Input Sheets**

BMP BENEFIT PLANNER INPUT

Scenario 1:	Default (Draft TMDL) Scenario
Description:	
York River Basin Draft TMDL	

Watershed Inputs

Total Watershed Area	3070	square miles
Total Watershed Stream-Miles		mi. (if known)
Watershed Stream Density	0.8	stream-miles/square mile

Total Flow Treated by Treatment Tier and WWTP Capacity Class

Nitrogen Removal					
Initial Effluent TN (mg/L)	Target Effluent TN (mg/L)	WWTP Capacity Class S (<1 mgd)	M (1-10 mgd)	L (>10 mgd)	Units
No N removal	8				Total MGD
No N removal	5				Total MGD
No N removal	3				Total MGD
8	5				Total MGD
8	3				Total MGD
5	3				Total MGD
CUSTOM Target Levels					
18.7	4	3.14	14	15	Total MGD
					Total MGD
					Total MGD

Phosphorus Removal					
Initial Effluent TP (mg/L)	Target Effluent TP (mg/L)	WWTP Capacity Class S (<1 mgd)	M (1-10 mgd)	L (>10 mgd)	Units
No P removal	1				Total MGD
No P removal	0.5				Total MGD
No P removal	0.1				Total MGD
1	0.5				Total MGD
1	0.1				Total MGD
0.5	0.1				Total MGD
CUSTOM Target Levels					
2.5	0.3	3.14	15	15	Total MGD
					Total MGD
					Total MGD

Scenario 1:	Default (Draft TMDL) Scenario

Nutrient Management Planning

Conventional Fertilizer Application		
Conventional Fertilizer application rate	36	kg N/acre/year
Nutrient Management Plans		
Cropland & Hay under NMP	80361	acres
NMP Fertilizer application rate	29	kg N/acre/year
Enhanced Nutrient Management Plans		
Cropland & Hay under Enhanced NMP	137175	acres
Fertilizer application rate (Enhanced NMP)	26	kg N/acre/year

Conservation Tillage - Input

Initial Land Use			
Conventional Tillage	95017	acres	
Low Tillage	0.1	acres	
Managed Land Use			
Low Tillage	95017	acres	
No-Tillage	0.1	acres	

Initial land use is assumed to be 100% conventional tillage unless otherwise specified.

Cover Crops - Input

Area Newly Planted with Cover Crops	29062.3914	acres

Animal Waste Management - Input

Manure-Acres Treated	567.7387785	acres

Grazing Land Management (Rotational Grazing) - Input

Area Converted to Rotational Grazing	36792.96328	acres

Scenario 1: Default (Draft TMDL) Scenario

Riparian Buffers - Input

Forest Buffers		
Length of Buffer Planting	3032212	feet
Average Buffer Width	100	feet (default = 100 ft.)
Grass Buffers		
Length of Buffer Planting	642728	feet
Average Buffer Width	100	feet (default = 100 ft.)

Afforestation & Reforestation Area - Input

USMP Region	Afforestation: Cropland	Afforestation: Pasture	Reforestation	units
Appalachia/ N				acres
Appalachia/ P, S, and T				acres
Corn Belt/ L, M, N, O				acres
Corn Belt/ R				acres
Delta States				acres
Lake States				acres
Mountain States				acres
Northeast				acres
Northeast Plains				acres
Pacific States/ A and D				acres
Pacific States/ B, C, and E				acres
Southeast	0	0	0	acres
Southern Plains				acres

Wetland Creation/Restoration - Input

Freshwater Mineral-Soil (FWMS) Wetland		
Initial Land Use (Converted to FWMS wetland)		
Conventional Tillage	759.9288064	acres
Mulch- & Ridge-Tillage		acres
No-Tillage		acres
Conventional Grazing		acres
Rotational Grazing	122.6675337	acres
Other (no initial fuel consumption)		acres
Forested Wetland		
Initial Land Use (Converted to Forested wetland)		
Conventional Tillage		acres
Mulch- & Ridge-Tillage		acres
No-Tillage		acres
Conventional Grazing		acres
Rotational Grazing		acres
Other (no initial fuel consumption)		acres
Peatland		
Initial Land Use (Converted to Peatland)		
Conventional Tillage		acres
Mulch- & Ridge-Tillage		acres
No-Tillage		acres
Conventional Grazing		acres
Rotational Grazing		acres
Other (no initial fuel consumption)		acres
Estuarine Wetland		
Initial Land Use (Converted to Estuarine wetland)		
Conventional Tillage		acres
Mulch- & Ridge-Tillage		acres
No-Tillage		acres
Conventional Grazing		acres
Rotational Grazing		acres
Other (no initial fuel consumption)		acres

Scenario 1:	Default (Draft TMDL) Scenario

Stream Restoration - Input

Length of stream to be restored	0	feet

Stormwater Retrofits - Input

Mixed Land Use Retrofits		
Pervious Urban Land Treated	24450.73474	acres
Impervious Urban Land Treated	4842.751164	acres
Ultraurban Retrofits		
Total Land Treated	12577.8898	acres

BMP BENEFIT PLANNER INPUT

Scenario 2:	Alternative Scenario
Description:	
York River Alternative Scenario	

Watershed Inputs

Total Watershed Area	3070	square miles
Total Watershed Stream-Miles	0	mi. (if known)
Watershed Stream Density	0.8	stream-miles/square mile

Total Flow Treated by Treatment Tier and WWTP Capacity Class

Nitrogen Removal					
Initial Effluent TN (mg/L)	Target Effluent TN (mg/L)	WWTP Capacity Class S (<1 mgd)	M (1-10 mgd)	L (>10 mgd)	Units
No N removal	8				Total MGD
No N removal	5				Total MGD
No N removal	3				Total MGD
8	5				Total MGD
8	3				Total MGD
5	3				Total MGD
CUSTOM Target Levels					
18.7	6	3.14	14	15	Total MGD
					Total MGD
					Total MGD

Phosphorus Removal					
Initial Effluent TP (mg/L)	Target Effluent TP (mg/L)	WWTP Capacity Class S (<1 mgd)	M (1-10 mgd)	L (>10 mgd)	Units
No P removal	1				Total MGD
No P removal	0.5				Total MGD
No P removal	0.1				Total MGD
1	0.5				Total MGD
1	0.1				Total MGD
0.5	0.1				Total MGD
CUSTOM Target Levels					
2.5	0.7	3.14	15	15	Total MGD
					Total MGD
					Total MGD

Scenario 2:	Alternative Scenario

Nutrient Management Planning

Conventional Fertilizer Application		
Conventional Fertilizer application rate	36	kg N/acre/year
Nutrient Management Plans		
Cropland & Hay under NMP	96433.2	acres
NMP Fertilizer application rate	29	kg N/acre/year
Enhanced Nutrient Management Plans		
Cropland & Hay under Enhanced NMP	164610	acres
Fertilizer application rate (Enhanced NMP)	26	kg N/acre/year

Conservation Tillage - Input

Initial Land Use			
Conventional Tillage	95017	acres	
Low Tillage	0.1	acres	
Managed Land Use			
Low Tillage	114020.4	acres	
No-Tillage	0.1	acres	

Initial land use is assumed to be 100% conventional tillage unless otherwise specified.

Cover Crops - Input

Area Newly Planted with Cover Crops	34874.86968	acres

Animal Waste Management - Input

Manure-Acres Treated	681.2865342	acres

Grazing Land Management (Rotational Grazing) - Input

Area Converted to Rotational Grazing	44151.55594	acres

Scenario 2: Alternative Scenario

Riparian Buffers - Input

Forest Buffers		
Length of Buffer Planting	3638654.4	feet
Average Buffer Width	100	feet (default = 100 ft.)
Grass Buffers		
Length of Buffer Planting	771273.6	feet
Average Buffer Width	100	feet (default = 100 ft.)

Afforestation & Reforestation Area - Input

USMP Region	Afforestation: Cropland	Afforestation: Pasture	Reforestation	units
Appalachia/ N				acres
Appalachia/ P, S, and T				acres
Corn Belt/ L, M, N, O				acres
Corn Belt/ R				acres
Delta States				acres
Lake States				acres
Mountain States				acres
Northeast				acres
Northeast Plains				acres
Pacific States/ A and D				acres
Pacific States/ B, C, and E				acres
Southeast	0	0	0	acres
Southern Plains				acres

Wetland Creation/Restoration - Input

Freshwater Mineral-Soil (FWMS) Wetland		
Initial Land Use (Converted to FWMS wetland)		
Conventional Tillage	911.9145677	acres
Mulch- & Ridge-Tillage		acres
No-Tillage		acres
Conventional Grazing		acres
Rotational Grazing	147.2010404	acres
Other (no initial fuel consumption)		acres
Forested Wetland		
Initial Land Use (Converted to Forested wetland)		
Conventional Tillage		acres
Mulch- & Ridge-Tillage		acres
No-Tillage		acres
Conventional Grazing		acres
Rotational Grazing		acres
Other (no initial fuel consumption)		acres
Peatland		
Initial Land Use (Converted to Peatland)		
Conventional Tillage		acres
Mulch- & Ridge-Tillage		acres
No-Tillage		acres
Conventional Grazing		acres
Rotational Grazing		acres
Other (no initial fuel consumption)		acres
Estuarine Wetland		
Initial Land Use (Converted to Estuarine wetland)		
Conventional Tillage		acres
Mulch- & Ridge-Tillage		acres
No-Tillage		acres
Conventional Grazing		acres
Rotational Grazing		acres
Other (no initial fuel consumption)		acres

Scenario 2:	Alternative Scenario

Stream Restoration - Input

Length of stream to be restored	0	feet

Stormwater Retrofits - Input

Mixed Land Use Retrofits		
Pervious Urban Land Treated	12225.36737	acres
Impervious Urban Land Treated	2421.375582	acres
Ultraurban Retrofits		
Total Land Treated	6288.9449	acres

ATTACHEMENT C
***BMP Benefit Planner* Output Sheets**

BMP Benefit Planner TABULAR RESULTS

Input Summary	Scenario 1	Scenario 2
Total Flow Treated for N-Removal (MGD)	32.14	32.14
Total Flow Treated for P-Removal (MGD)	33.14	33.14
Nutrient Management Planning Implemented (acres)	80,361	96,433
Low-Tillage (acres)	95,017	114,020
No-Tillage (acres)	0	0
Area Newly Planted with Cover Crops (acres)	29,062	34,875
New Animal Waste Management Practices (manure-acres)	568	681
Area Converted to Rotational Grazing (acres)	36,793	44,152

Input Summary	Scenario 1	Scenario 2
Forest Buffers Planted (acres)	13,922	16,706
Grass Buffers Planted (acres)	2,951	3,541
Total Area of Forestation (acres)	0	0
Total Area of Wetlands Created/Restored (acres)	883	1,059
Feet of Stream to be Restored	0	0
Area Served by New Retention/Detention Basins (acres)	29,293	14,647
Area Served by New Bioretention/Biofiltration (acres)	12,578	6,289

SCENARIO 1: Default (Draft TMDL) Scenario

Output Summary	TOTAL	WWTP Nut. Rem. Upgrade	Nutrient Management Planning	Conservation Tillage	Cover Crops	Animal Waste Management	Rotational Grazing	Riparian Buffers	Afforestation and Reforestation	Wetland Restoration	Stream Restoration	Stormwater Retrofits
Capital Cost ($)	$2,026,468,409	$143,009,299	$5,066,645	$0	$0	$24,635,591	$6,765,373	$22,390,535	$0	$1,321,032	$0	$1,823,279,934
O&M Cost ($/year)	$62,579,481	$7,870,372	$0	$316,815	$961,902	$2,009,682	$270,615	$0	$0	$41,175	$0	$51,108,920
Annualized Total Cost ($/year)	$228,443,135	$19,345,808	$1,860,515	$316,815	$961,902	$5,653,981	$1,146,762	$1,616,622	$0	$127,110	$0	$197,413,620
GHG Emissions (Mg CO2e/yr)	-2.3E+03	2.3E+04	-2.4E+04	-1.2E+03	2.1E+02	0.0E+00	-1.2E+03	0.0E+00	0.0E+00	5.2E+02	0.0E+00	0.0E+00
Carbon Sequestration Rate (Mg CO2e/yr)	8.1E+04	0.0E+00	0.0E+00	4.9E+04	8.5E+03	0.0E+00	4.4E+03	1.9E+04	0.0E+00	1.2E+02	0.0E+00	3.1E+02
Lifetime Carbon Sequestration Potential (Mg CO2e)	7.3E+06	0.0E+00	0.0E+00	9.8E+05	1.7E+05	0.0E+00	8.7E+04	6.1E+06	0.0E+00	2.2E+04	0.0E+00	2.3E+04
Cost per Pound Nitrogen Reduced ($/lb/yr)	$51.92	$7.42	$1.65	$1.62	$5.85	$5.92	$16.26	$6.84	--	$2.48	--	$1,238.76
Cost per Pound Phosphorus Reduced ($/lb/yr)	$342.17	$39.11	$10.29	$5.00	$155.98	$48.69	$80.31	$142.03	--	$10.32	--	$4,791.97
Cost per Ton Sediment Reduced ($/ton/yr)	$4,429.84	--	--	$9.43	$280.92	--	$293.45	$347.58	--	$91.32	--	$42,824.98

Other Ancillary Benefit Summary	Scenario Average	WWTP Nut. Rem. Upgrade	Nutrient Management Planning	Conservation Tillage	Cover Crops	Animal Waste Management	Rotational Grazing	Riparian Buffers	Afforestation and Reforestation	Wetland Restoration	Stream Restoration	Stormwater Retrofits
Wildlife (terrestrial or wetland) habitat	3.2	0.0	0.0	1.2	0.4	0.0	0.9	0.1	0.0	0.0	0.0	0.5
In-stream (aquatic) habitat	7.0	0.0	0.0	3.6	0.7	0.0	0.9	0.1	0.0	0.0	0.0	1.6
Aesthetics	2.9	0.0	0.0	1.2	0.4	0.0	0.5	0.1	0.0	0.0	0.0	0.7
Public health	4.3	0.0	2.8	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.5
Flood hazard mitigation	7.5	0.0	0.0	4.8	1.1	0.0	0.0	0.1	0.0	0.0	0.0	1.4
Groundwater recharge and baseflow protection	5.1	0.0	0.0	3.6	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7

BMP Benefit Planner TABULAR RESULTS

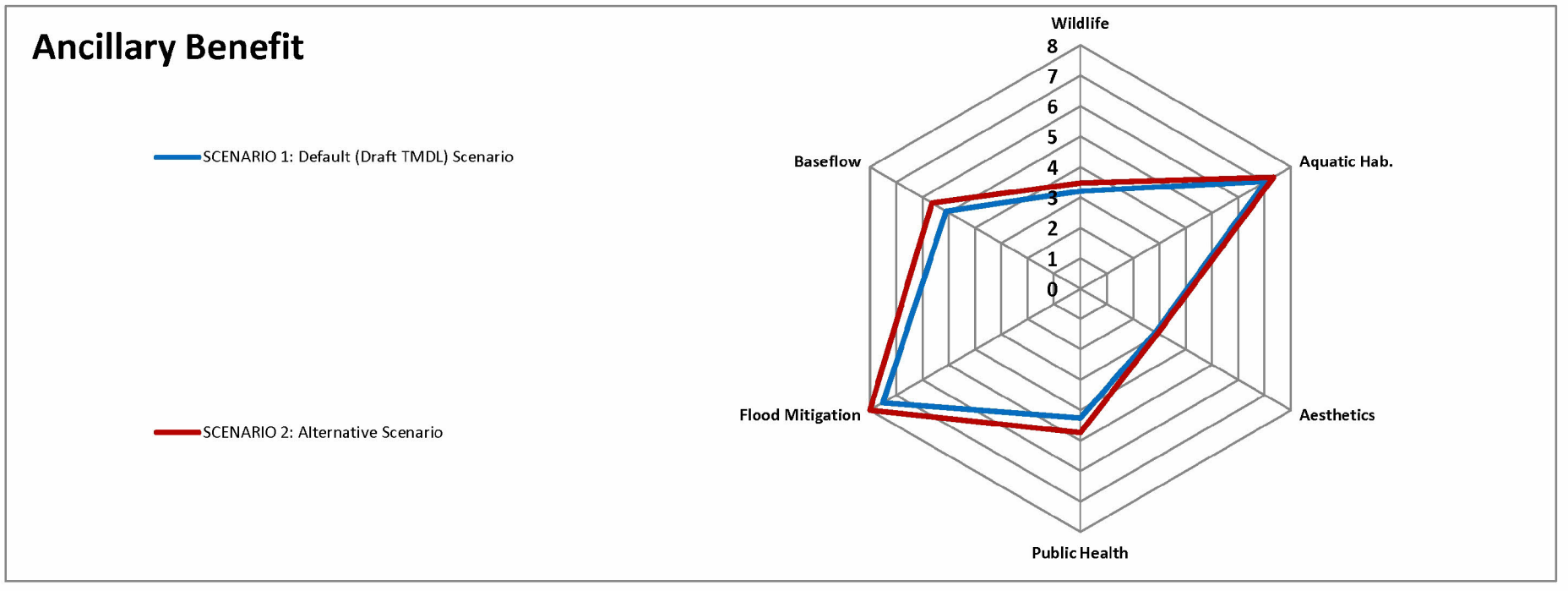
SCENARIO 2: Alternative Scenario

Output Summary	TOTAL	WWTP Nut. Rem. Upgrade	Nutrient Management Planning	Conservation Tillage	Cover Crops	Animal Waste Management	Rotational Grazing	Riparian Buffers	Afforestation and Reforestation	Wetland Restoration	Stream Restoration	Stormwater Retrofits
Capital Cost ($)	$1,027,823,507	$43,968,528	$6,079,974	$0	$0	$29,562,709	$8,118,447	$26,868,642	$0	$1,585,239	$0	$911,639,967
O&M Cost ($/year)	$30,577,153	$702,466	$0	$380,178	$1,154,282	$2,411,618	$324,738	$0	$0	$49,410	$0	$25,554,460
Annualized Total Cost ($/year)	$116,957,873	$4,230,615	$2,232,618	$380,178	$1,154,282	$6,784,777	$1,376,114	$1,939,947	$0	$152,532	$0	$98,706,810
GHG Emissions (Mg CO2e/yr)	-1.9E+04	1.2E+04	-2.8E+04	-1.4E+03	2.5E+02	0.0E+00	-1.4E+03	0.0E+00	0.0E+00	6.2E+02	0.0E+00	0.0E+00
Carbon Sequestration Rate (Mg CO2e/yr)	9.7E+04	0.0E+00	0.0E+00	5.9E+04	1.0E+04	0.0E+00	5.2E+03	2.3E+04	0.0E+00	1.5E+02	0.0E+00	1.6E+02
Lifetime Carbon Sequestration Potential (Mg CO2e)	8.8E+06	0.0E+00	0.0E+00	1.2E+06	1.7E+05	0.0E+00	1.0E+05	7.3E+06	0.0E+00	2.2E+04	0.0E+00	1.2E+04
Cost per Pound Nitrogen Reduced ($/lb/yr)	$24.96	$3.08	$1.65	$1.62	$5.85	$5.92	$16.26	$6.84	--	$2.48	--	$1,238.76
Cost per Pound Phosphorus Reduced ($/lb/yr)	$170.10	$2.24	$10.29	$5.00	$155.98	$48.69	$80.31	$142.03	--	$10.32	--	$4,791.97
Cost per Ton Sediment Reduced ($/ton/yr)	$1,993.96	--	--	$9.43	$280.92	--	$293.45	$347.58	--	$91.32	--	$42,824.98

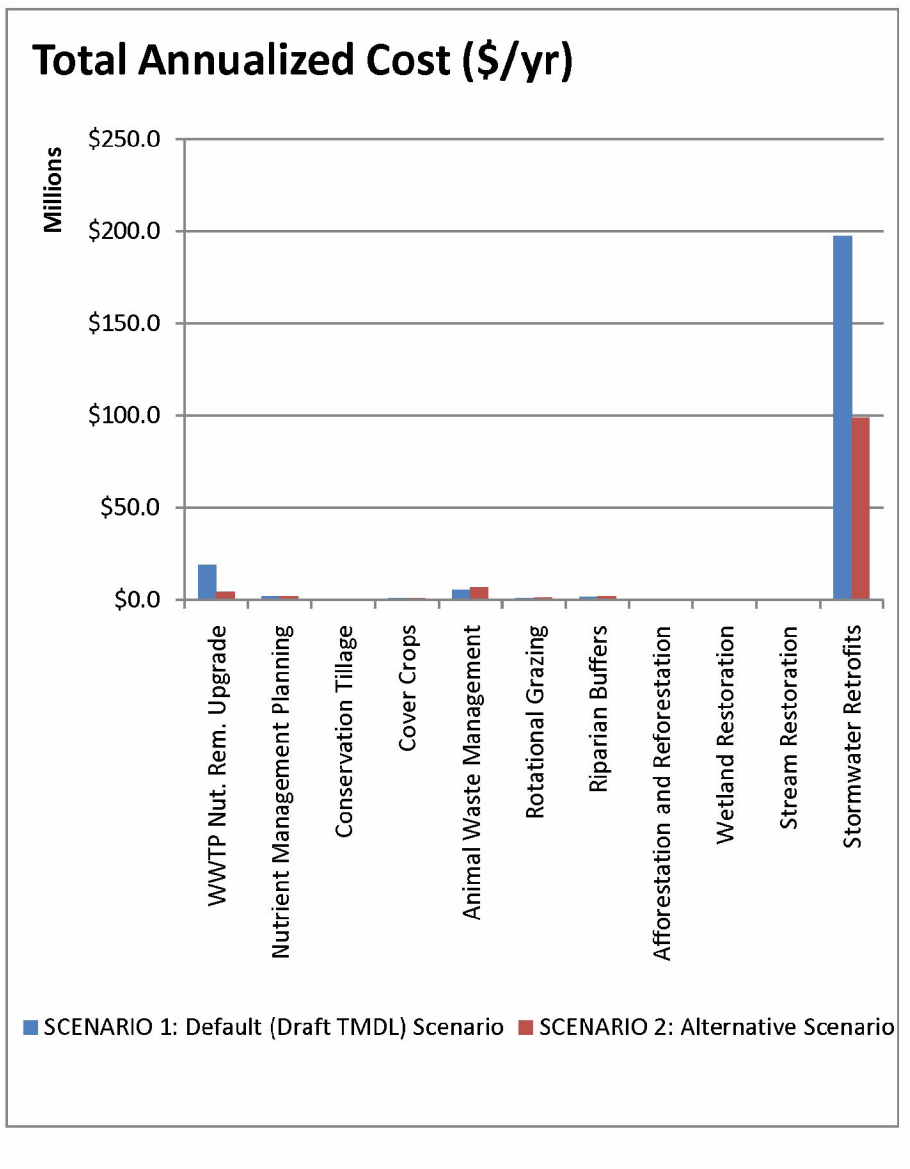
Other Ancillary Benefit Summary	Scenario Average	WWTP Nut. Rem. Upgrade	Nutrient Management Planning	Conservation Tillage	Cover Crops	Animal Waste Management	Rotational Grazing	Riparian Buffers	Afforestation and Reforestation	Wetland Restoration	Stream Restoration	Stormwater Retrofits
Wildlife (terrestrial or wetland) habitat	3.5	0.0	0.0	1.5	0.4	0.0	1.1	0.1	0.0	0.0	0.0	0.3
In-stream (aquatic) habitat	7.3	0.0	0.0	4.4	0.9	0.0	1.1	0.1	0.0	0.0	0.0	0.8
Aesthetics	2.9	0.0	0.0	1.5	0.4	0.0	0.6	0.1	0.0	0.0	0.0	0.3
Public health	4.7	0.0	3.3	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.3
Flood hazard mitigation	8.0	0.0	0.0	5.8	1.3	0.0	0.0	0.1	0.0	0.0	0.0	0.7
Groundwater recharge and baseflow protection	5.6	0.0	0.0	4.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.3

BMP Benefit Planner GRAPHICAL RESULTS

Ancillary Benefit



Total Annualized Cost ($/yr)



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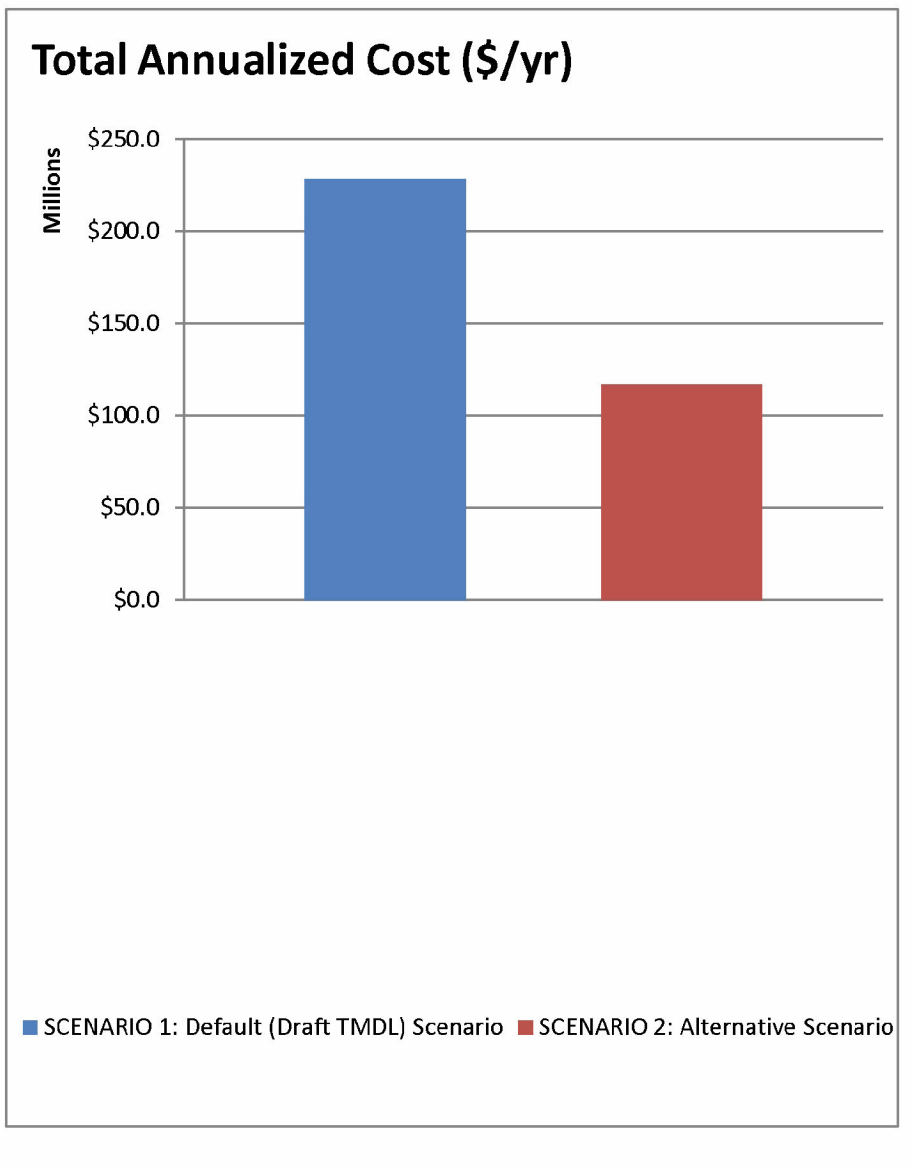
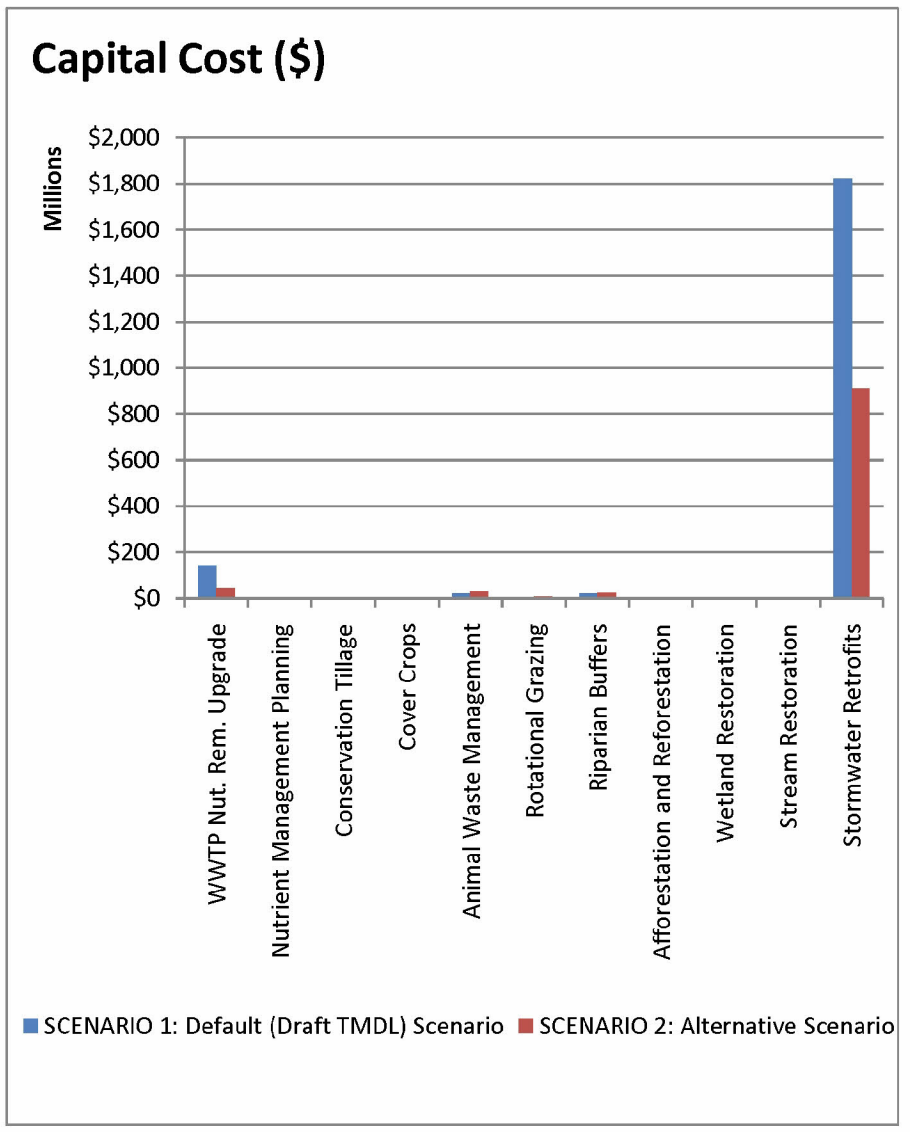
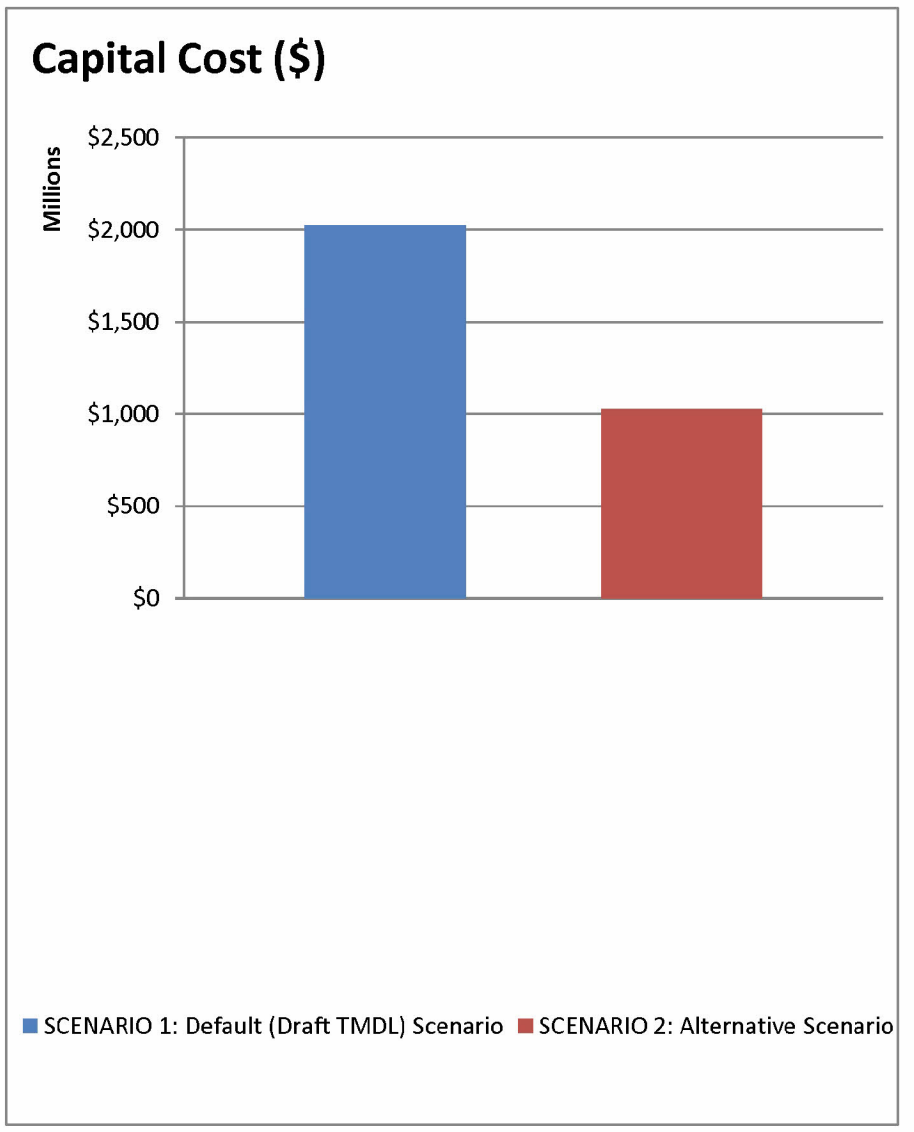
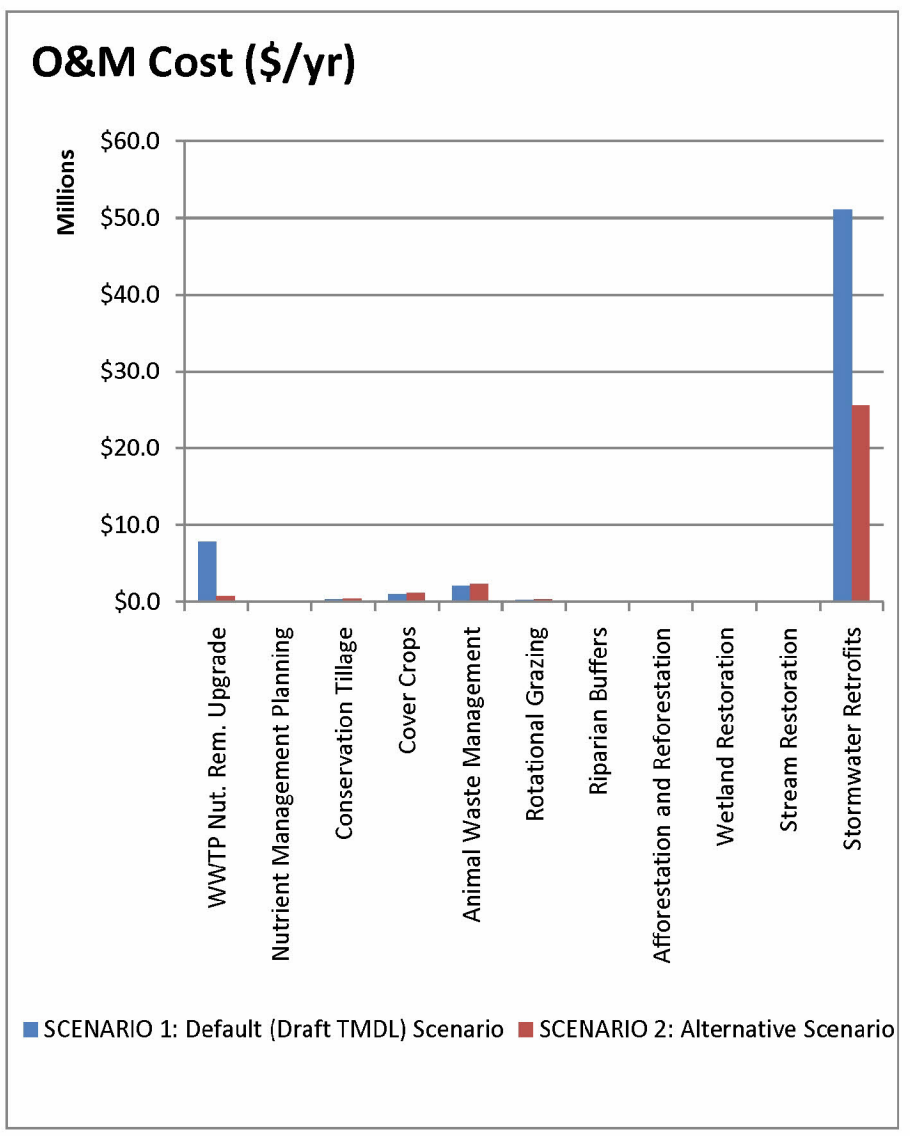
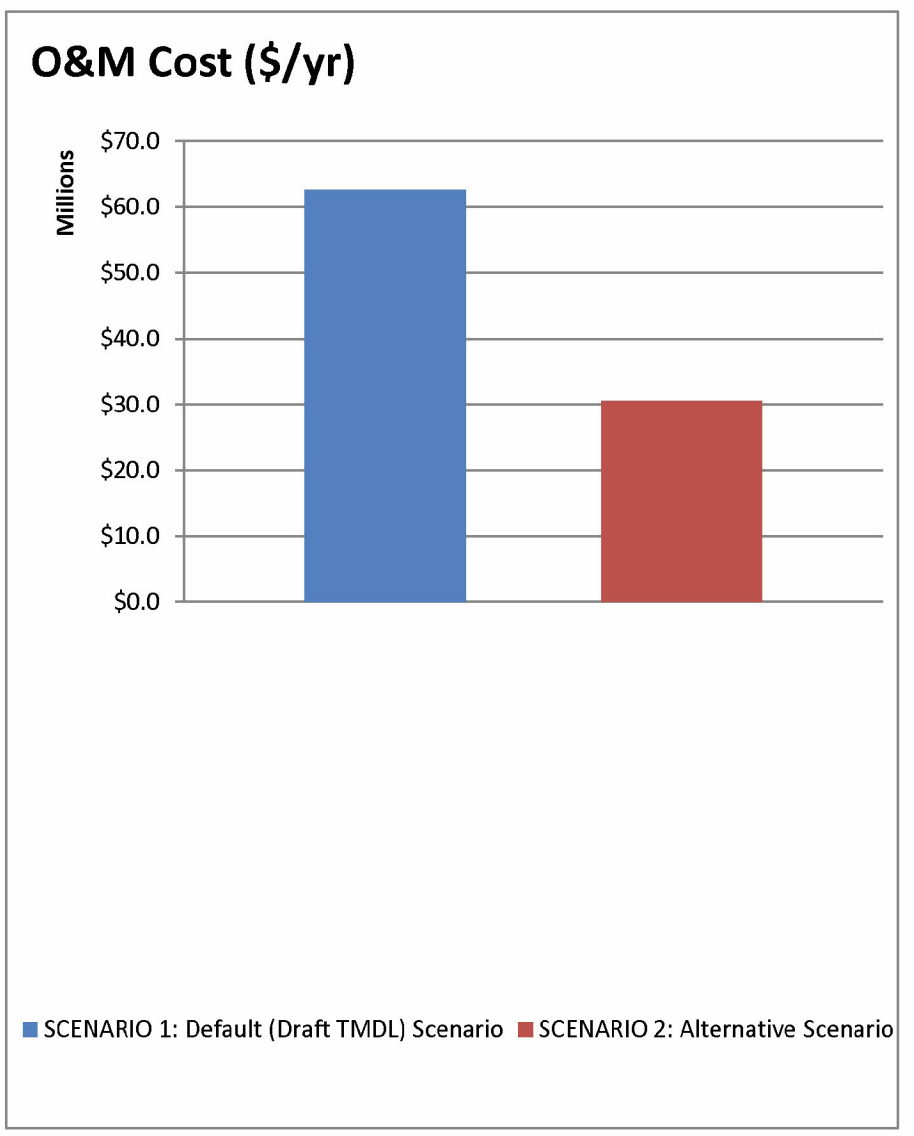


BMP Benefit Planner GRAPHICAL RESULTS

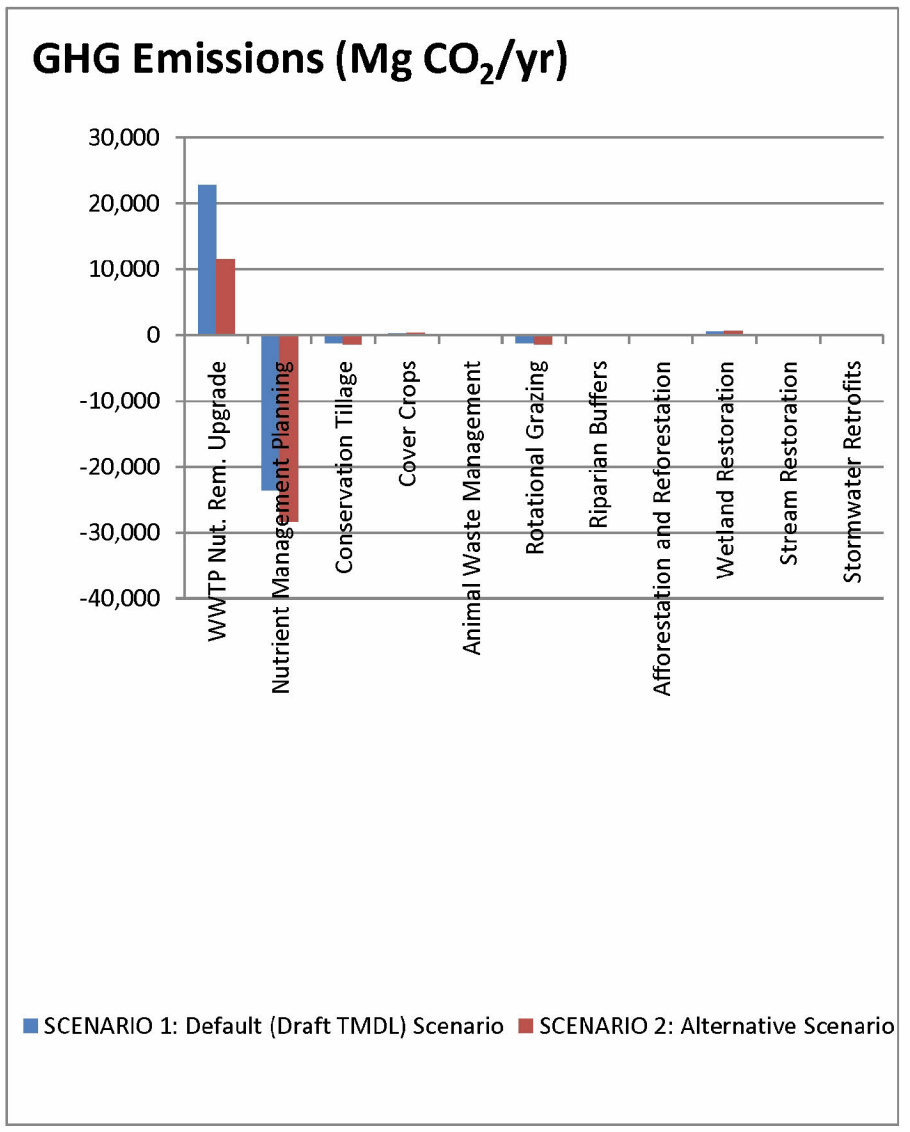


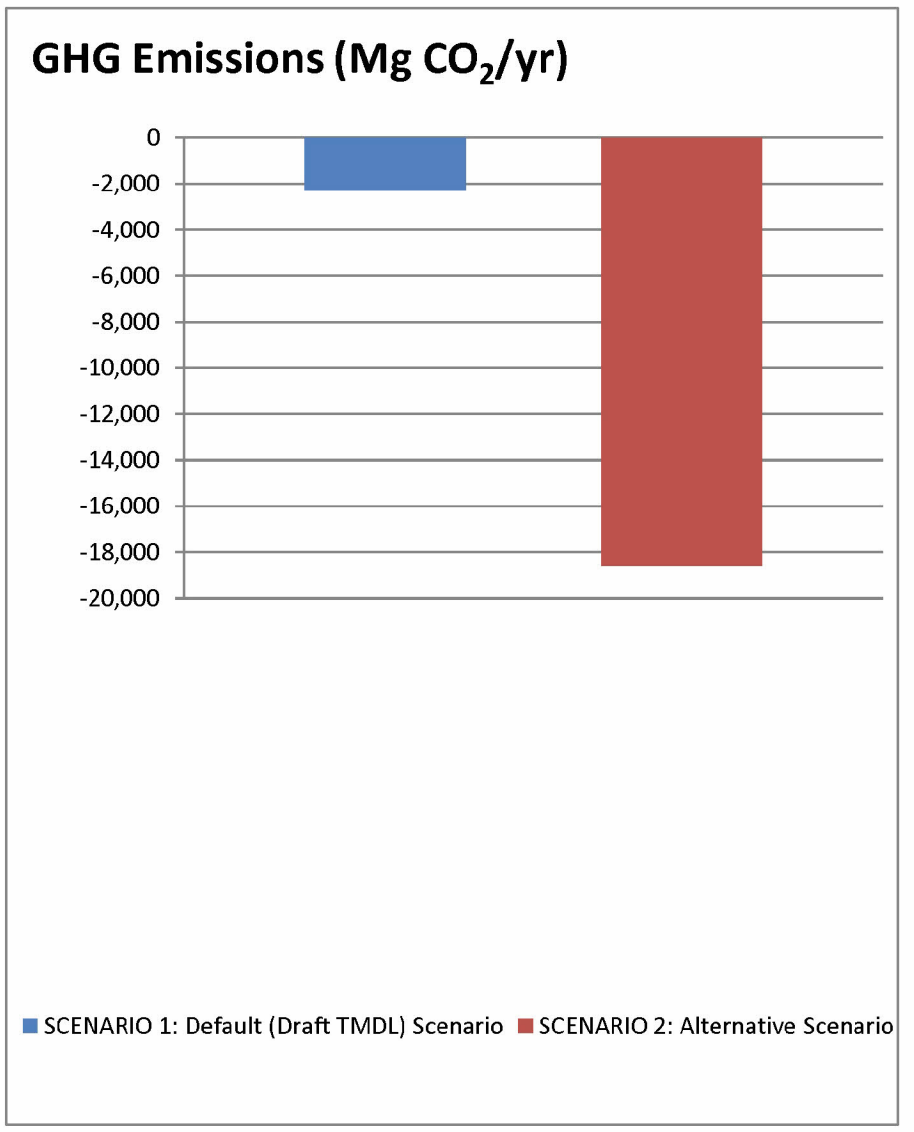


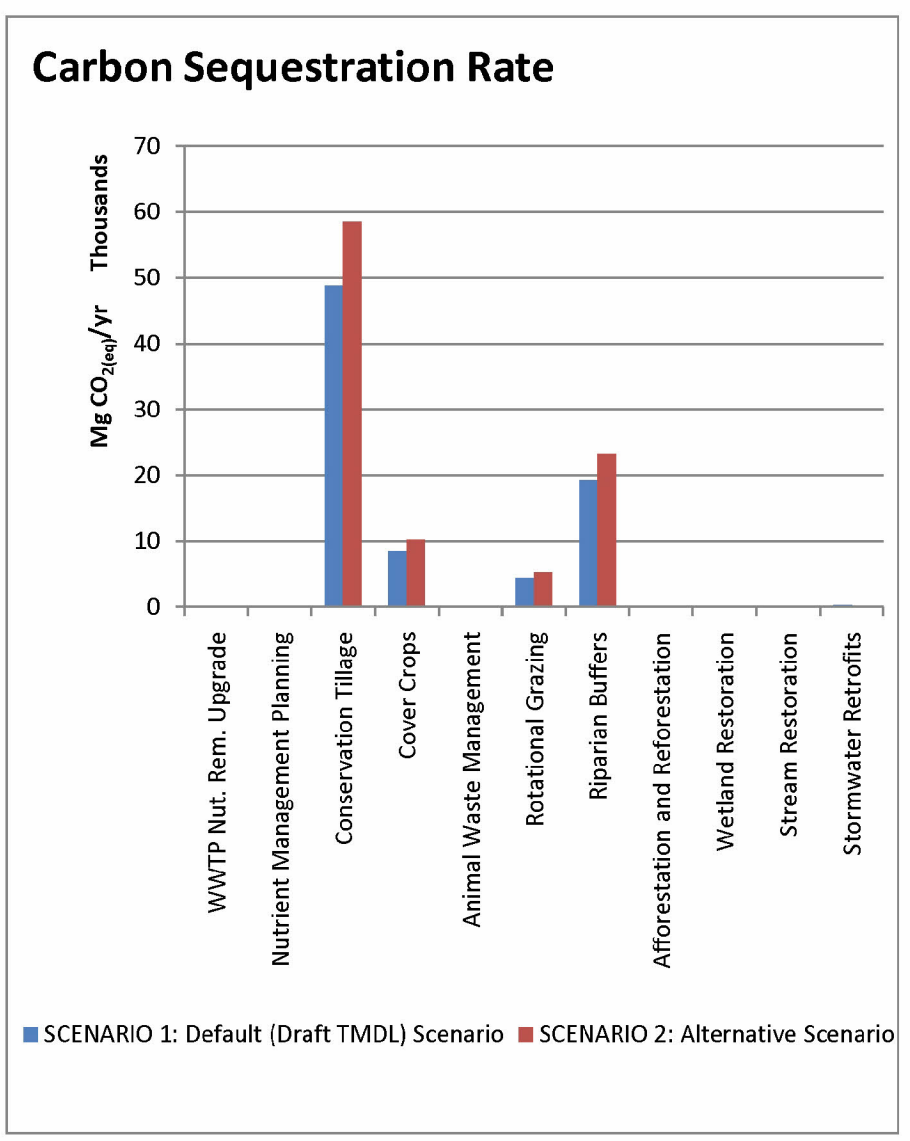


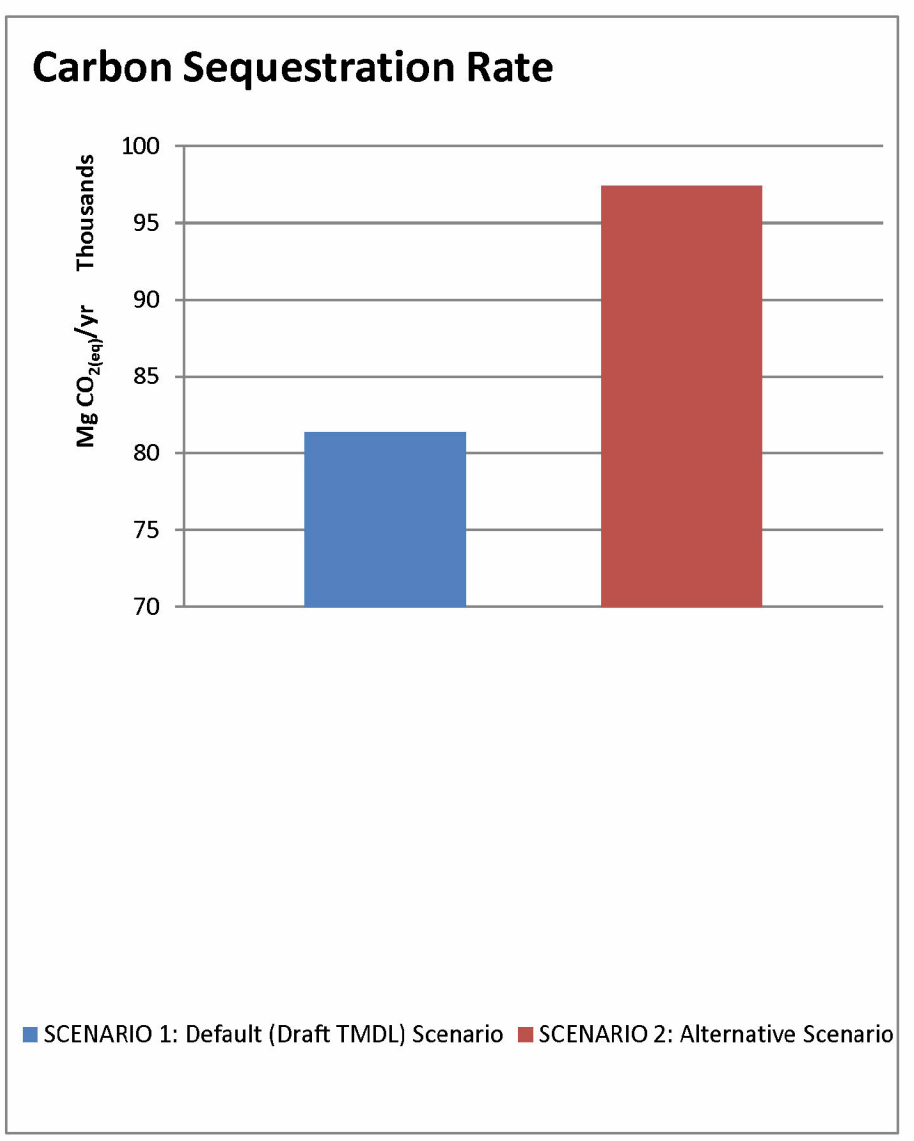


BMP Benefit Planner GRAPHICAL RESULTS

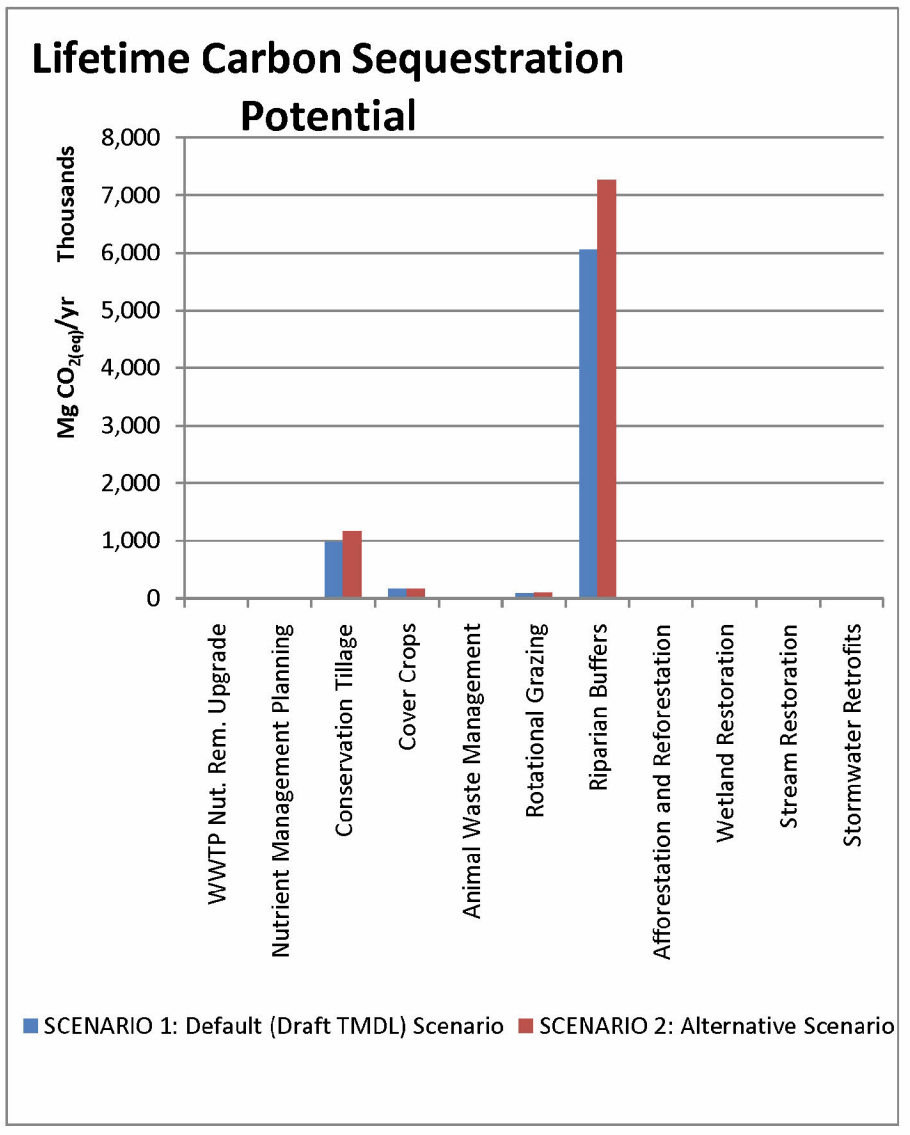


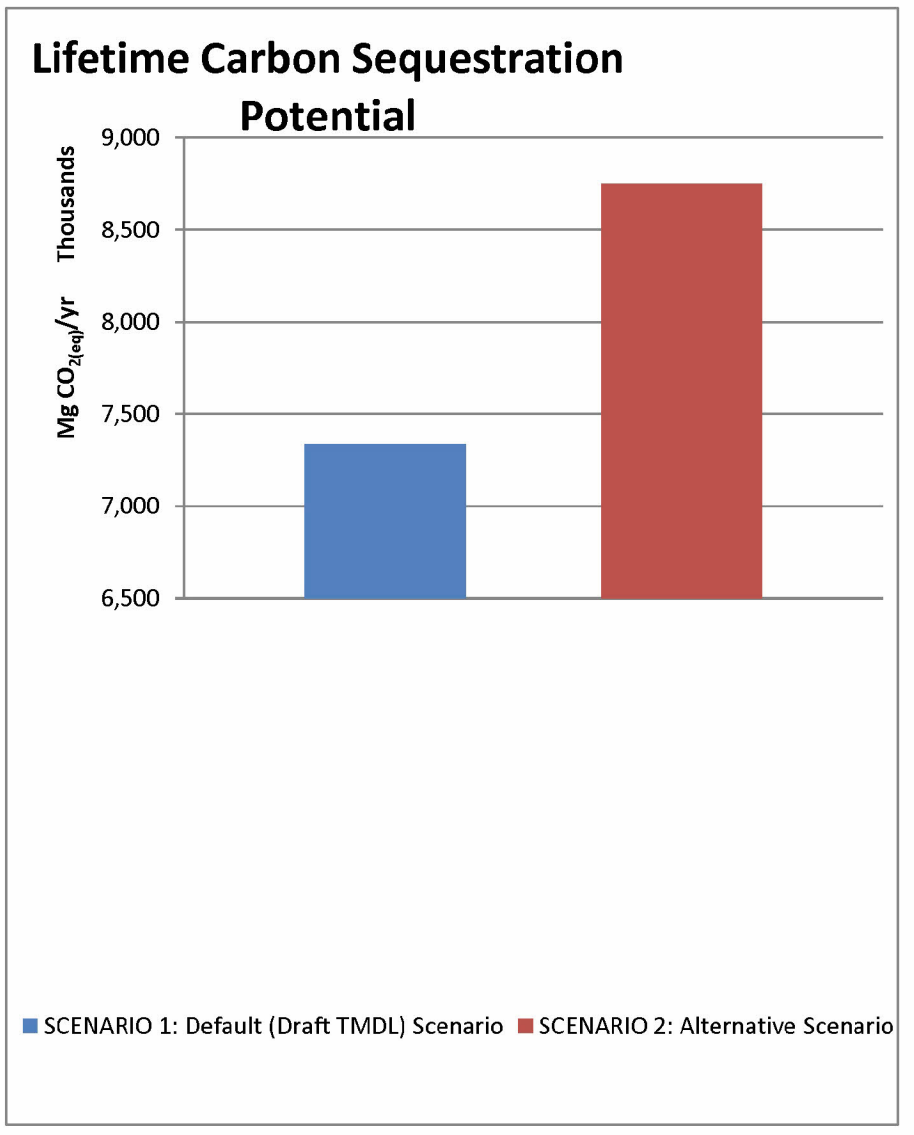






BMP Benefit Planner GRAPHICAL RESULTS





APPENDIX 6

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

JUL 1 2010

The Honorable Doug Domenech
Secretary
Department of Natural Resources
1111 East Broad Street
Richmond, Virginia 23219

Dear Secretary Domenech:

I thank you for your continued commitment to the Bay restoration partnership. As we develop the Chesapeake Bay Total Maximum Daily Load (TMDL) and Watershed Implementation Plans (WIPs), we have faced some challenging issues. It is critical that the Partnership remain strong as we work through any remaining differences and show the citizens of the watershed that we can deliver on our commitments, complete a TMDL by the end of 2010, and put forth aggressive, defensible implementation plans that will put in place all necessary actions, by no later than 2025, to fully restore the Bay and tidal rivers – with an interim goal of 60% or more being accomplished by 2017.

As I have said before, restoring the health of the Bay and our rivers will not be easy. If it were, we would have completed the necessary restoration actions long ago. Every one of the Bay jurisdictions has a significant role to play. Fortunately, through the Chesapeake Bay Program partnership, we have a scientific understanding of the Bay ecosystem that is the envy of other restoration efforts around the U.S. and the world. In addition to abundant scientific information and monitoring data, we have state-of-the-art computer models that provide us with an irreplaceable tool to help guide and formulate our restoration efforts and inform our actions. But the models are just that – tools. Armed with these tools, we, the senior policy makers that represent the Bay watershed partners, must decide upon the actions necessary to meet our restoration commitments.

I wish to emphasize that the ongoing Bay restoration effort will be an adaptive process. We have afforded opportunities in the schedule to make corrections and adjust course as necessary while we continue to learn from the science and the results of our restoration actions.

We are at a critical point in the Bay Partnership and our combined restoration effort. It is imperative as we move forward, that we meet our commitments, measure continued progress toward our goals, and confirm for the public that we will fully restore the health of the Chesapeake Bay and rivers. I welcome the opportunity to work closely with you and the other Bay restoration partners to finalize the Bay TMDL and advance implementation actions.

In earlier correspondence, EPA notified the Bay watershed jurisdictions that we would provide draft allocations for nitrogen and phosphorus for each jurisdiction by July 1, 2010. I write to you today in fulfillment of that commitment. Also note that by August 15, I will notify the jurisdictions of their draft sediment allocations. I want to thank the many dedicated staff within each of the jurisdictions and EPA who have labored many long hours to develop these draft allocations. The enclosed tables detail the jurisdictions' major river basin nitrogen and phosphorus draft allocations in the Bay and its tidal rivers as well as a "temporary reserve" that may be revised or removed in 2011 when Phase II WIPs are developed (see Temporary Reserve section below for further explanation).

As you review these draft nutrient allocations, it is important to keep in mind several key assumptions behind their development and how we expect they will be used as we move forward with the development of the Bay TMDL and the jurisdictions' WIPs.

Nutrient Allocations and Potential for Modification

The nitrogen and phosphorus draft allocations included with this letter are intended to be used to inform the jurisdictions of their WIP development. They may be modified subject to EPA's review of each jurisdiction's draft and final WIPs [see Tables 1 and 2]. EPA may also modify these draft allocations in the draft or final TMDL to reflect input received during the TMDL public review period and the agency's review of the implementation framework provided in the jurisdictions' WIPs.

The draft allocations are also subject to change based upon refinements in 2011 to the Phase 5.3 Chesapeake Bay Watershed Model as requested by the jurisdictions. As stated in my recent letter on June 11, 2010, any adjustments to draft allocations as a result of the agreed upon watershed model refinements to address nutrient management effectiveness and suburban land use will be incorporated into the Phase II WIP development and submission process in 2011. EPA does not expect to pursue making further modifications to the Phase 5.3 model prior to the 2017 Phase III WIP development process.

Water Quality Standards

EPA developed the draft nutrient allocations provided with this letter under the assumption that the jurisdictions with Bay tidal waters – Maryland, Virginia, Delaware and the District of Columbia – would adopt currently proposed water quality standards revisions by the date the final TMDL is established. These revisions would incorporate the proposed Bay criteria assessment and designated uses refinements contained in the fifth addendum to the original 2003 Chesapeake Bay water quality criteria document issued by EPA in May, 2010. This Bay criteria addendum reflects the latest scientific findings and technical advances in the application and assessment of Bay water quality criteria. The draft allocations also assume that Maryland will soon propose (and timely adopt) modifications of its water quality standards regulations to include a lower Chester River deep-channel restoration variance, to recognize the periodic presence of a deep-water use in the South, Severn and Magothy Rivers, and to include a site-specific dissolved oxygen criterion for the Pocomoke River. The draft allocations also assume that, in addition to the jurisdictions' timely adoption of these water quality standards revisions,

EPA has sufficient time to perform the necessary review of these revisions and ultimately approves them as consistent with the Clean Water Act. If the jurisdictions do not adopt these revised standards, or if EPA does not approve them by the time the final TMDL is established, EPA would establish the Bay TMDL based on alternative draft allocations reflective of the states' and District's existing Bay water quality standards. EPA is working in close cooperation with each of these four jurisdictions and will ascertain the need for alternative draft allocations if obstacles are encountered.

EPA Expectations for WIPs

EPA has clearly articulated its expectations for the jurisdictions' WIPs in correspondence issued on November 4, 2009, in the April 2, 2010 document entitled *A Guide for EPA's Evaluation of Phase I Watershed Implementation Plans*, and through periodic calls and webinars. We will continue to use the expectations contained in those documents and communications to ascertain the adequacy of jurisdictions' draft and final WIPs. EPA has been working closely with staff in all seven jurisdictions to assist in WIP development and will continue to do so over the ensuing months. In addition, we have made substantial technical and financial resources available to assist in the WIP development process.

Potential Federal Backstop Actions

In a letter dated December 29, 2009, I summarized several potential actions that EPA could pursue to "ensure that jurisdictions develop and implement appropriate Watershed Implementation Plans, attain appropriate two-year milestones of progress, and provide timely and complete information to an effective accountability system for monitoring pollutant reductions." EPA intends to work closely and cooperatively with the jurisdictions in the development of effective implementation programs in line with the previous guidance. The capacity still exists for each jurisdiction to work with EPA staff to evaluate various "what if" scenarios to achieve the necessary nutrient reductions. However, in the event that WIP submittals to EPA are inadequate to ensure continued progress and fulfillment of the Partnership's commitments to achieve Bay water quality standards and implement the TMDL's allocations, EPA is prepared to take appropriate "backstop" actions as necessary.

Schedule

On June 11, 2010, I sent representatives of the seven Bay watershed jurisdictions a letter containing a revised schedule for development of the Bay TMDL and all three phases of the WIPs. EPA has adjusted the schedule, where possible, to provide additional time and flexibility to address concerns raised by partners at the April 2010 Principals' Staff Committee (PSC) meeting as well as in individual follow-up discussions. In keeping with that schedule, I am today providing you with the basinwide, jurisdictional, and major river basin draft allocations for nitrogen and phosphorus. By August 15, I will provide the basinwide, jurisdictional, and major river basin draft allocations for sediment. By September 1, EPA expects jurisdictions to submit draft WIPs which sub-allocate these nutrient and sediment jurisdictional and major river basin draft allocations among source sectors and the 92 Bay TMDL segmentsheds. After review of the respective state's Phase I WIPs and allocations, EPA would propose for comment (on September

24 for a 45-day public comment period) the draft Bay TMDL. The draft TMDL's allocations will be informed by the information in the jurisdictions' WIPs and EPA anticipates the TMDL's allocations would be consistent with the jurisdiction's WIP allocations if EPA determines they are set at a level necessary to implement the applicable water quality standards. Following the completion of the public comment period, EPA expects the jurisdictions to revise their WIPs as necessary and submit final WIPs to EPA by November 29. EPA expects the jurisdictions to submit their Phase II and III WIPs, with revisions to the jurisdiction's allocations, according to the schedule included in my letter of June 11, 2010.

Temporary Reserve

As discussed at the April 29-30, 2010 PSC meeting and further described in the June 11, 2010 letter, EPA has included a separate Temporary Reserve, for both nitrogen and phosphorus, of five percent for each jurisdiction that will be applied for purposes of WIP development and incorporating "contingency actions" [see Table 3]. EPA expects jurisdictions to incorporate contingency actions into their WIPs as a separate suite of actions to be undertaken in the event that the 2011 refinements to the Phase 5.3 Chesapeake Bay Watershed Model result in draft allocations lower than those provided with this letter. Contingency actions should be described in similar detail to implementation actions included in the jurisdiction's WIPs for the 2017-2025 timeframe.
This Temporary Reserve has been included to account for the possibility that the 2011 refinements to the Phase 5.3 Chesapeake Bay Watershed Model result in draft allocations to the jurisdictions lower than those provided in this letter.

The additional five percent Temporary Reserve was derived based on two main factors: 1) the basinwide nitrogen draft allocation changed approximately five percent when transitioning from Phase 5.2 of the Chesapeake Bay Watershed Model (approximately 200 million pounds in fall 2009) to Phase 5.3 (approximately 187 million pounds currently), therefore, the additional model revisions are not expected to result in changes to draft allocations that are any greater than that extent; and 2) very preliminary, rough cut, model runs suggest that the two forthcoming refinements to the model will alter basinwide nutrient draft allocations by five percent or less.

Depending on the results of the 2011 model refinements, the Temporary Reserve will be revised or removed as appropriate during the 2011 Phase II WIP development process. In parallel, if needed, jurisdictions can submit for public comment and EPA approval any proposed modifications to the Bay TMDL draft allocations.

Establishing the Allocation for Air Sources

It is important to note that the basinwide nitrogen allocation identifies 15.7 million pounds of atmospheric deposition loads direct to Chesapeake Bay and tidal tributary surface waters. EPA anticipates that this loading cap will be achieved through implementation of federal Clean Air Act regulations by EPA and the states through 2020. Projected reductions in atmospheric nitrogen deposition loads to the surrounding watershed over this same time period are already accounted for within the individual jurisdiction and major river basin nitrogen draft

allocations. Any additional nitrogen reductions realized through more stringent air pollution controls at the jurisdictional level, beyond minimum federal requirements, may be credited to the individual jurisdictions through future revisions to the jurisdictions' WIPs, two-year milestones, and the Bay TMDL tracking and accounting framework.

I appreciate your willingness to work in partnership with EPA to develop the Chesapeake Bay TMDL and Watershed Implementation Plans that will ensure that the Bay and rivers are restored. I look forward to working with you to advance our mutual Bay restoration goals. If you have any questions regarding the draft allocations presented with this letter or the TMDL development process, please do not hesitate to contact me or the Mrs. LaRonda Koffi, Virginia State Liaison, at (215) 814-5374.

Sincerely,

Shawn M. Garvin
Regional Administrator

Enclosures

Table 1 - Chesapeake Bay Watershed Nitrogen and Phosphorus Draft Allocations by Basin
Table 2 - Chesapeake Bay Watershed Nitrogen and Phosphorus Draft Allocations by Jurisdiction
Table 3 - Chesapeake Bay Watershed Nitrogen and Phosphorus Temporary Reserve by Jurisdiction

cc: State and D.C. Agency PSC Representatives

Table 1. Chesapeake Bay Watershed Nitrogen and Phosphorus Draft Allocations by Basin		
Basin/Jurisdiction	**Nitrogen Draft Allocations (million pounds per year)**	**Phosphorus Draft Allocations (million pounds per year)**
SUSQUEHANNA		
NY	8.23	0.52
PA	71.74	2.31
MD	1.08	0.05
SUSQUEHANNA Total	81.06	2.88
EASTERN SHORE		
DE	2.95	0.26
MD	9.71	1.09
PA	0.28	0.01
VA	1.21	0.16
EASTERN SHORE Total	14.15	1.53
WESTERN SHORE		
MD	9.74	0.46
PA	0.02	0.001
WESTERN SHORE Total	9.76	0.46
PATUXENT		
MD	2.85	0.21
PATUXENT Total	2.85	0.21
POTOMAC		
PA	4.72	0.42
MD	15.70	0.90
DC	2.32	0.12
VA	17.46	1.47
WV	4.67	0.74
POTOMAC Total	44.88	3.66
RAPPAHANNOCK		
VA	5.84	0.90
RAPPAHANNOCK Total	5.84	0.90
YORK		
VA	5.41	0.54
YORK Total	5.41	0.54
JAMES		
VA	23.48	2.34
WV	0.02	0.01
JAMES Total	23.50	2.35
Total Basin/Jurisdiction Draft Allocation	**187.44**	**12.52**
Atmospheric Deposition Draft Allocation[1]	**15.70**	**--**
Total Basinwide Draft Allocation	**203.14**	**12.52**

[1] Cap on atmospheric deposition loads direct to Chesapeake Bay and tidal tributary surface waters to be achieved by federal air regulations through 2020.

07/01/10

Table 2. Chesapeake Bay Watershed Nitrogen and Phosphorus Draft Allocations by Jurisdiction		
Jurisdiction/Basin	**Nitrogen Draft Allocations (million pounds per year)**	**Phosphorus Draft Allocations (million pounds per year)**
PENNSYLVANIA		
Susquehanna	71.74	2.31
Potomac	4.72	0.42
Eastern Shore	0.28	0.01
Western Shore	0.02	0.001
PA Total	76.77	2.74
MARYLAND		
Susquehanna	1.08	0.05
Eastern Shore	9.71	1.09
Western Shore	9.74	0.46
Patuxent	2.85	0.21
Potomac	15.70	0.90
MD Total	39.09	2.72
VIRGINIA		
Eastern Shore	1.21	0.16
Potomac	17.46	1.47
Rappahannock	5.84	0.90
York	5.41	0.54
James	23.48	2.34
VA Total	53.40	5.41
DISTRICT OF COLUMBIA		
Potomac	2.32	0.12
DC Total	2.32	0.12
NEW YORK		
Susquehanna	8.23	0.52
NY Total	8.23	0.52
DELAWARE		
Eastern Shore	2.95	0.26
DE Total	2.95	0.26
WEST VIRGINIA		
Potomac	4.67	0.74
James	0.02	0.01
WV Total	4.68	0.75
Total Basin/Jurisdiction Draft Allocation	**187.44**	**12.52**
Atmospheric Deposition Draft Allocation[2]	**15.70**	**--**
Total Basinwide Draft Allocation	**203.14**	**12.52**

[2] Cap on atmospheric deposition loads direct to Chesapeake Bay and tidal tributary surface waters to be achieved by federal air regulations through 2020.

07/01/10

Table 3. Chesapeake Bay Watershed Nitrogen and Phosphorus Temporary Reserve by Jurisdiction[3]		
Jurisdiction/Basin	Nitrogen Temporary Reserve (million pounds per year)	Phosphorus Temporary Reserve (million pounds per year)
PENNSYLVANIA	3.84	0.14
MARYLAND	1.95	0.14
VIRGINIA	2.67	0.27
DISTRICT OF COLUMBIA	0.12	0.01
NEW YORK	0.41	0.03
DELAWARE	0.15	0.01
WEST VIRGINIA	0.23	0.04
TOTAL TEMPORARY RESERVE	9.37	0.63

[3] EPA has included a Temporary Reserve of 5 percent for each jurisdiction that will be applied for purposes of Watershed Implementation Plan development and incorporating "contingency actions" necessary to meet allocations.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

AUG 13 2010

The Honorable Doug Domenech
Secretary of Natural Resources
1111 East Broad Street
Richmond, Virginia 23219

Dear Secretary Domenech:

Thank you for your continued commitment to the development of the Chesapeake Bay Total Maximum Daily Load (TMDL) and Watershed Implementation Plans (WIPs). The Environmental Protection Agency (EPA) is providing the enclosed draft sediment allocations, expressed as total suspended solids (TSS), as one of the remaining steps in the path to developing the draft Chesapeake Bay TMDL. The draft allocations of sediment are for your use in development of your WIP. EPA is committed to establishing the final TMDL by the end of 2010, and encourages the states and the District of Columbia to put forth comprehensive WIPs that will identify all necessary actions to fully restore the Bay and its tidal tributaries. EPA and the Chesapeake Bay Executive Council have committed to having all restoration actions completed by no later than 2025, with an interim goal to have sufficient practices in place by 2017 to achieve 60% or more of the total necessary load reductions.

States with tidal Bay waters and the District of Columbia have established Chesapeake Bay water quality standards (WQS) for both water clarity and submerged aquatic vegetation (SAV). The SAV standards are based on a long historical record of observed SAV acreage and assign an SAV goal for each Bay segment. Recent surveys show that the Chesapeake Bay is currently achieving 46% of the Bay-wide SAV goal of 185,000 acres.

A key step in the TMDL process is the establishment of sediment allocations that will restore the health of the Bay and its tidal rivers and streams. The Bay TMDL does not replace the need to set targets for local stream impairments due to sediment throughout the watershed. Our analysis points to the fact that there is a close and consistent relationship between nutrient and sediment controls. This analysis indicates that there is a great amount of commonality and co-benefit of controlling nutrients in the Bay watershed and the reduction of sediment loadings to meet Bay water quality standards. EPA has utilized the strength of this relationship in the draft allocations.

Sediment Allocations and Potential for Modification

The sediment allocations are part of the Bay TMDL needed to achieve the SAV WQS in the tidal waters. To provide the jurisdictions with some flexibility in developing their draft WIPs, the draft sediment allocations are being initially expressed as a range for each of the jurisdictions and major river basins. The Bay-wide range in sediment allocations is 6.1 to 6.7 billion pounds per year (bpy) of TSS. The enclosed tables detail the specific basin-jurisdictions draft allocation ranges for sediment at both the jurisdiction and river basin level.

Informed by the draft WIPs, EPA's draft TMDL will assign a single allocation for each of the 92 segments as well as allocations to the contributing jurisdictions. EPA will assess the WIPs to ensure that the distribution of the sediment loads will attain the SAV WQS in all 92 segments. If EPA determines that the draft WIP distributes the sediment load in a manner that does not achieve WQS, EPA will work closely with each jurisdiction to resolve the matter. Resolution may include redistribution of the loading within the basin or among the segments, and/or implementation commitments in the Phase I or Phase II WIPs. EPA also may modify these draft sediment allocations in the final TMDL to reflect input received during the TMDL public comment period. The final Bay TMDL will be based on public input, the jurisdictions' final WIPs, and additional attainment analysis to confirm that the final assigned sediment allocations will achieve WQS.

EPA Expectations for WIPs

EPA recognizes that the time allowed to develop draft WIPs to achieve the sediment allocations is very short. The range has been proposed to provide jurisdictions with some flexibility in developing draft WIPs. In addition, the range represents loads expected to be achievable through full implementation of nutrient management practices necessary to attain the draft nitrogen and phosphorus allocations issued on July 1, 2010. Finally, in many basins the range captures the level of effort states have previously proposed through earlier Tributary Strategies.

It is EPA's expectation that each jurisdiction will include implementation strategies in the Phase I WIPs that will achieve a sediment allocation within the range assigned for river basins and jurisdictions. The final WIP submission is expected to show attainment of the sediment and nutrient allocations of the TMDL.

As stated in the July 1, 2010 letter, EPA has articulated its expectations for the jurisdictions' WIPs in correspondence issued on November 4, 2009, in the April 2, 2010 document entitled *A Guide for EPA's Evaluation of Phase I Watershed Implementation Plans*, and through periodic calls and webinars. EPA will rely upon the expectations described in this previous correspondence to determine the adequacy of the jurisdictions' WIP submittals.

Furthermore, as indicated in past correspondence, EPA is prepared take appropriate federal action in the event that there are shortfalls in jurisdictions' efforts to develop and implement acceptable WIPs for sediment and nutrients.

Schedule

With this letter, EPA presents a range of sediment allocations for the basin-jurisdictions. Jurisdictions are to use this range of sediment allocations to develop their draft Phase I WIPs to be submitted to EPA on September 1, 2010. EPA expects that jurisdictions will provide sufficient detail in their WIPs to show how point and nonpoint source loads are distributed among the 92 Bay segments. The information contained in these draft WIPs will inform EPA in establishing a specific set of sediment allocations that will be included in the draft TMDL to be released on September 24, 2010 for a 45-day public comment period. Following the completion of the public comment period, EPA expects the jurisdictions to revise their WIPs as necessary and submit final Phase I WIPs to EPA by November 29, 2010. As noted, EPA will establish a final TMDL by December 31, 2010. EPA expects the jurisdictions to submit their Phase II and III WIPs according to the schedule included in the letter of June 11, 2010.

I appreciate the extensive efforts of you and your staff to complete the important tasks of defining effective Watershed Implementation Plans to meet these goals and for engaging the Bay and local watershed stakeholders in this process. I pledge our continued cooperation and support in this regard. Should you have any questions regarding the draft sediment allocation ranges presented in this letter or the TMDL development process, please do not hesitate to contact me or have your staff contact Mrs. LaRonda Koffi, EPA's Virginia Liaison, at 215-814-5374.

Sincerely,

Shawn M. Garvin
Regional Administrator

Enclosures

Table 1 - Chesapeake Bay Watershed Sediment Draft Allocation by Basin
Table 2 - Chesapeake Bay Watershed Sediment Draft Allocation by Jurisdiction

cc: State and D.C. Agency PSC Representatives

Table 1. Chesapeake Bay Watershed Sediment Draft Allocations by Basin	
Basin/Jurisdiction	**Sediment Allocation Range (million pounds total suspended solids (TSS) per year)**
SUSQUEHANNA	
NY	293-322
PA	1,660-1,826
MD	60-66
SUSQUEHANNA Total	2,013-2,214
EASTERN SHORE	
DE	58-64
MD	166-182
PA	21-23
VA	11-12
EASTERN SHORE Total	256-281
WESTERN SHORE	
MD	155-170
PA	0.37-0.41
WESTERN SHORE Total	155-171
PATUXENT	
MD	82-90
PATUXENT Total	82-90
POTOMAC	
PA	221-243
MD	654-719
DC	10-11
VA	810-891
WV	226-248
POTOMAC Total	1,920-2,113
RAPPAHANNOCK	
VA	681-750
RAPPAHANNOCK Total	681-750
YORK	
VA	107-118
YORK Total	107-118
JAMES	
VA	837-920
WV	15-17
JAMES Total	852-937
Total Basinwide Draft Allocation[1]	**6,066-6,673**

[1] The basinwide allocation range rounds up to 6.1-6.7 billion pounds per year.

Table 2. Chesapeake Bay Watershed Sediment Draft Allocations by Jurisdiction	
Jurisdiction/Basin	**Sediment Allocation Range (million pounds total suspended solids (TSS) per year)**
PENNSYLVANIA	
Susquehanna	1,660-1,826
Potomac	221-243
Eastern Shore	21-23
Western Shore	0.37-0.41
PA Total	1,903-2,093
MARYLAND	
Susquehanna	60-66
Eastern Shore	166-182
Western Shore	155-170
Patuxent	82-90
Potomac	654-719
MD Total	1,116-1,228
VIRGINIA	
Eastern Shore	11-12
Potomac	810-891
Rappahannock	681-750
York	107-118
James	837-920
VA Total	2,446-2,691
DISTRICT OF COLUMBIA	
Potomac	10-11
DC Total	10-11
NEW YORK	
Susquehanna	293-322
NY Total	293-322
DELAWARE	
Eastern Shore	58-64
DE Total	58-64
WEST VIRGINIA	
Potomac	226-248
James	15-17
WV Total	241-265
Total Basinwide Draft Allocation[2]	**6,066-6,673**

[2] The basinwide allocation range rounds up to 6.1-6.7 billion pounds per year.

APPENDIX 7

Reasonable Assurance Workgroup Findings and Options

Principals' Staff Committee Meeting

Washington, DC

September 22, 2008

Hello, Neighbor!

Sec. Bryant Motion

- At the direction of the Chesapeake Bay Program Principals' Staff Committee, the chair will appoint a 'Reasonable Assurance' Group who will work to develop recommendations for how the partners will address reasonable assurance within the Bay TMDL. The group will report its recommendations back at the Principals' Staff Committee meeting in September.

Workgroup Composition

- **Frank Dawson**, Co-Chair, Maryland Department of Natural Resources
- **Jeff Corbin**, Co-Chair, Virginia Secretary of Natural Resources
- **Rich Batiuk**, U.S. EPA Chesapeake Bay Program Office
- **Jim Curtin**, U.S. EPA Office of General Counsel
- **Bill Duncanson**, Richmond County, Virginia
- **Rich Eskin**, Maryland Department of the Environment
- **Carlton Haywood** , Interstate Commission on the Potomac River Basin
- **Roy Hoagland**, Chesapeake Bay Foundation
- **Bob Koroncai**, U.S. EPA Region 3 Water Protection Division
- **Rick Parrish**, Southern Environmental Law Institute
- **Ann Swanson**, Chesapeake Bay Commission
- **Bob Yowell**, Pennsylvania Department of Environmental Protection

Today's presentation

- Background on Reasonable Assurance
- EPA's Reasonable Assurance expectations for the Bay TMDL
- Options for the Bay Program Partners

PSC Decision Points

- Do you support the reasonable assurance framework?

- Executive Council Action?
  - ✓Commit to develop a fundamentally different TMDL?
  - ✓Commitment to fill "gaps"?
  - ✓Adopt restoration end date and intermediate milestones?
  - ✓Self-imposed contingencies?
  - ✓Task PSC and Workgroup to gather additional information and make decisions at a later date?

Background on Reasonable Assurance

- Clean Water Act and EPA regulations do not define "reasonable assurance"

  - EPA's TMDL regulations at 40 C.F.R 130.2(i) - Definition of TMDL - EPA states, "If Best Management Practices (BMPs) or other nonpoint source pollution controls make more stringent load allocations practicable, then wasteload allocations [in the TMDL] can be made less stringent."

Background (Cont.)

- EPA guidance (1991) – Does define when reasonable assurance must be demonstrated, but not really what it is:
  - Wasteload allocation for point source(s) is greater than zero; and
  - Nonpoint source pollution reductions necessary to meet load allocations
  - Specific Language…
  - "In addition, before approving a TMDL in which some of the load reductions are allocated to nonpoint sources in lieu of additional load reductions allocated to point sources, there must be specific assurances that the nonpoint source reductions will in fact occur."

Broad spectrum of acceptable reasonable assurance demonstrations in 30,000 TMDLs approved by EPA

This Ain't Your Grandpa's TMDL

Welsh Letter to Griffin, 9/11/08

- Unprecedented amount of work in the Bay
- Ever-increasing scientific understanding
- Significant past investments
- Public/Political support for restoration
- Heightened expectations
- "Expectations for the Bay TMDL are not applicable to the TMDL program in general."

Again…

Given that this TMDL is different than most others…are there actions that the PSC or EC should take in regards to, or in tandem with, the development of the TMDL?

Sec. Griffin Letter to J. Capacasa

8/22/08

In order for the CBP and the State partners to fully understand the TMDL and what constitutes "reasonable assurance", we request that EPA address the following questions posed by the Workgroup

1. What jurisdictions will be within the formal TMDL, and which will be outside of the TMDL?
2. What does it mean for jurisdictions to be outside the TMDL? Specifically, what are the requirements of states that are outside of the TMDL?
3. What is EPA's definition of "reasonable assurance", both for TMDLs in general and its specific expectations for "reasonable assurance" provisions in the Bay TMDL?
4. Noting that the PSC has stated for the record that it wants the Bay TMDL to be a model for TMDLs nationwide, what are EPA's expectations for reasonable assurance in the Bay TMDL?
5. What are the ramifications of failing to provide adequate reasonable assurance?

EPA's Position on the Bay TMDL

- Scope: 6 states and District of Columbia in TMDL
- Expectations apply to Bay TMDL, not all TMDLs
- Given past Bay Program efforts, reasonable assurance provisions are on more comprehensive end of spectrum
- Acceleration of Bay restoration does not rely only on TMDL reasonable assurance provisions
  - ✓ Broader "reasonable assurance and implementation framework" with components within and accompanying TMDL

EPA's Position on the Bay TMDL

- 6 components of reasonable assurance and implementation framework:
  1. Revise tributary strategies to identify controls needed to meet TMDL allocations*
  2. Evaluate existing programmatic, funding, and technical capacity to fully implement tributary strategy*
  3. Identify gaps in current programs and local capacity to achieve the needed controls*
  4. Commit to systematically fill gaps/build program capacity – agree to meet specific, iterative, short-term (1-2 year) milestones – demonstrate increased implementation and/or pollutant reductions
  5. Commit to track/monitor/assess progress at set times – adaptive management
  6. Accept contingency requirements if milestones are not met

* Similar to previous tributary strategy efforts

Possible Contingencies

- EPA - Emphasis on fulfilling commitments, but contingencies for failure could include:
  - ✓ redoing TMDL
  - ✓ tighter effluent limits (traditional pt. sources, MS4s, CAFOs)

- EPA 1991 TMDL Guidance

  "Where there are not reasonable assurances, under the CWA, the entire load reduction must be assigned to point sources."

Additional "Nuclear" Contingency Options
(CBF proposal **NOT** EPA)

- Moratorium on issuance of NPDES permits
- EPA exercises CWA §504 emergency powers – additional regs on pollution
- EPA assumes authority of state water programs
- More stringent state regs on NPS under existing state/fed law (CAFOs, SW, land use, etc.)
- New state regs on NPS (buffer ordinances, ag certification programs, etc.)
- Increase enforcement penalties (construction, wetlands, etc.) put $ back into implementation
- Increase permit fees (NPDES, wetlands, construction, etc.) put $ back into implementation

EPA's Position on the Bay TMDL

- Schedule:
  - ✓ Legal deadline under Virginia Consent Decree – May 1, 2011
  - ✓ PSC deadline – December 31, 2010
  - ✓ Revised schedule to meet PSC deadline, but will revert to legal deadline if necessary rather than issue insufficient TMDL

- Scale of allocations within the TMDL:
  - Tidal states (Maryland, Virginia, Delaware) and District of Columbia
    - ✓ Individual WLAs for point sources
    - ✓ Separate LAs by nonpoint source sector, with possible finer scale allocation to counties or sub-basins
    - ✓ Will work with each jurisdiction to set appropriate scale
  - Non-tidal jurisdictions (Pennsylvania, West Virginia, New York)
    - ✓ Gross WLA and LA to major basin in each jurisdiction if supported by tributary strategy with sufficient detail
    - ✓ EPA can assign WLAs to individual point sources if necessary

Options for Bay Program Partners

- Commit to fundamentally different TMDL (Uber-TMDL)
- Commit to delist all impaired segments by 20?? (or nutrient reductions) and set interim milestones to measure progress
- Create regional compact with contingencies for failed commitments (ex. Marine Fisheries Commissions approach)
- Commit to fulfill x% of programmatic, funding, and technical assistance gaps within x years
- Potential contingencies: moratorium on new or expanded permits, apply regulations to nonpoint sources, etc.
- Commit to implementation framework to accompany TMDL
- Defer any actions for 6 months while PSC and Workgroup gather additional information

Proposed PSC/EC Recommendation for Discussion

- **Adopt EPA's TMDL/Reasonable Assurance Framework**
  - √ All 6 States and DC are "In" the TMDL
  - √ Differing Scale of Allocations for Tidal vs. Non-Tidal
  - √ Revise Trib Strats
  - √ ID Existing Capacity
  - √ ID Gaps
  - √ Commit to Gap Filling
  - √ Develop Short-Term Milestones
  - √ Track/Monitor/Assess progress at set times
  - √ Accept Contingency Requirements
- **Set New Clean-Up Deadline at 2020**
  - ✓ 2020 deadline based on modeling info
  - ✓ More distant deadline based on monitoring info
- **Set Milestones at 2-Year Intervals**
  - ✓ Meshes with budget cycles and 303(d) list cycle
- **Agree to Need for Contingency Requirements**
  - ✓ Refine specific contingency requirements by 2009 EC
  - ✓ Contingency requirements could vary by jurisdiction


Photo by Russ Mader

APPENDIX 8

Federal Register

Thursday,
July 13, 2000

Part VI

Environmental Protection Agency

40 CFR Part 9 et al.

Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation; Final Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9, 122, 123, 124, and 130

[FRL–6733–2]

Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: Today's final rule revises and clarifies the Environmental Protection Agency's (EPA) current regulatory requirements for establishing Total Maximum Daily Loads (TMDLs) under the Clean Water Act (CWA) so that TMDLs can more effectively contribute to improving the nation's water quality. Clean water has been a national goal for many decades. While significant progress has been made, particularly in stemming pollution from factories and city sewage systems, major challenges remain. These challenges call for a focused effort to identify polluted waters and enlist all those who enjoy, use, or depend on them in the restoration effort. Today's action will establish an effective and flexible framework to move the country toward the goal of clean water for all Americans. It establishes a process for making decisions in a common sense, cost effective way on how best to restore polluted waterbodies. It is based on identifying and implementing necessary reductions in both point and nonpoint sources of pollutants as expeditiously as practicable. States, Territories, and authorized Tribes will develop more comprehensive lists of all waterbodies that do not attain and maintain water quality standards. States, Territories, and authorized Tribes will schedule, based on priority factors, the establishment of all necessary TMDLs over 10 years, with an allowance for another five years where necessary. The rule also specifies elements of approvable TMDLs, including implementation plans which contain lists of actions and expeditious schedules to reduce pollutant loadings. States, Territories, and authorized Tribes will provide the public with opportunities to comment on methodologies, lists, prioritized schedules, and TMDLs prior to submission to EPA. The rule lays out specific timeframes under which EPA will assure that lists of waters and TMDLs are completed as scheduled, and necessary National Pollutant Discharge Elimination System (NPDES) permits are issued to implement TMDLs. The final rule explains EPA's discretionary authority to object to, and reissue if necessary, State-issued NPDES permits that have been administratively continued after expiration where there is a need for a change in the conditions of the permit to be consistent with water quality standards and established and approved TMDLs.

EPA believes that these regulations are necessary because the TMDL program which Congress mandated in 1972 has brought about insufficient improvement in water quality. EPA had been concerned about this lack of progress for some time when, in 1996, it established a Federal Advisory Committee. The Committee was asked to advise EPA on possible improvements to the program. After careful deliberations, the Committee recommended that EPA amend several aspects of the regulations.

EPA believes that these regulations will benefit human health and the environment by establishing clear goals for identification of impaired waterbodies and establishment of TMDLs. The regulations will also ensure that States, Territories and authorized Tribes give a higher priority to restoring waterbodies which have a greater potential to affect human health or threatened or endangered species thereby focusing the benefits of these regulations on the most pressing problems.

DATES: This regulation is not effective until 30 days after the date that Congress allows EPA to implement this regulation. EPA will publish notice of the effective date in the **Federal Register**. This action is considered issued for purposes of judicial review, as of 1:00 p.m. Eastern Daylight Time, on July 27, 2000 as provided in § 23.2.

ADDRESSES: The complete administrative records for the final rule have been established under docket numbers W–98–31 and W–99–04, and include supporting documentation as well as printed, paper versions of electronic comments. Copies of information in the record are available upon request. A reasonable fee may be charged for copying. The records are available for inspection and copying from 9 a.m. to 4 p.m., Monday through Friday, excluding legal holidays, at the Water Docket, EPA, East Tower Basement, 401 M Street, SW, Washington, DC. For access to docket materials, please call (202) 260–3027 to schedule an appointment.

FOR FURTHER INFORMATION CONTACT: Jim Pendergast, U.S. EPA, Office of Wetlands, Oceans and Watersheds (4503F), 1200 Pennsylvania Ave., N.W., Washington, D.C. 20460, (202) 260–9549 for information pertaining to Part 130 of today's rule, or Kim Kramer, U.S. EPA, Office of Wastewater Management (4203), 1200 Pennsylvania Ave., N.W., Washington, D.C. 20460, (202) 401–4078, for information regarding Parts 122, 123, and 124.

SUPPLEMENTARY INFORMATION:

A. Authority

Clean Water Act sections 106, 205(g), 205(j), 208, 301, 302, 303, 305, 308, 319, 402, 501, 502, and 603; 33 U.S.C. 1256, 1285(g), 1285(j), 1288, 1311, 1312, 1313, 1315, 1318, 1329, 1342, 1361, 1362, and 1373.

B. Table of Contents of This Preamble

Entities Potentially Regulated by the Final Rule

State, Territorial or authorized Tribal Governments.

States, Territories and authorized Tribes.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in this table could also be regulated. To determine whether you are regulated by this action, you should carefully examine the applicability criteria in § 130.20. If you have questions regarding the applicability of this action to a particular entity, consult one of the persons listed in the **FOR FURTHER INFORMATION CONTACT** section.

Response to Comments

This preamble explains in detail the elements of the final TMDL regulations and the amendments which EPA is making to the NPDES program in order to support implementation of the TMDL program. EPA has made changes to its proposal in response to comments received on the proposed rules. EPA has evaluated all the significant comments it received including comments submitted after the close of the comment period and prepared a Response to Comment Document containing EPA's response to those comments. This document complements discussions in this preamble and is available for review in the Water Docket.

Before Reading This Preamble, You Should Read the Final Rule

I. Introduction

A. Background

1. What are the Water Quality Concerns Addressed by this Rule?

The CWA includes a number of programs aimed at restoring and maintaining water quality. These include national technology-based effluent limitation guidelines; national water quality criteria guidance; State, Territorial and authorized Tribal water quality standards; State, Territorial and authorized Tribal nonpoint source (NPS) management programs; funding provisions for municipal wastewater treatment facilities; State, Territorial and authorized Tribal water quality monitoring programs; and the NPDES permit program for point sources. These programs have produced significant and widespread improvements in water quality over the last quarter-century, but many waterbodies still fail to attain or maintain water quality standards due to one or more pollutants.

The National Water Quality Inventory Report to Congress for 1998 indicates that of the 23 percent of the Nation's rivers and streams that have been assessed, 35 percent do not fully support water quality standards or uses and an additional 10 percent are threatened. Of the 32 percent of estuary waterbodies assessed, 44 percent are not fully supporting water quality standards or uses and an additional 9 percent are threatened. Of the 42 percent of lakes, ponds, and reservoirs assessed (not including the Great Lakes), 45 percent are not fully supporting water quality standards or uses and an additional 9 percent are threatened. The report also indicates that 90 percent of the Great Lakes shoreline miles have been assessed, and that 96 percent of these are not fully supporting water quality standards and an additional 2 percent are threatened. The report indicates that pollutants in rainwater runoff from urban and agricultural land are a leading source of impairment. Agriculture is the leading source of pollutants in assessed rivers and streams, contributing to 59 percent of the reported water quality problems and affecting about 170,000 river miles. Hydromodification is the second leading source of impairment, and urban runoff/storm sewers is the third major source, contributing respectively 20 percent and 12 percent of reported water quality problems. EPA recognizes that a large percentage of streams has not been assessed but believes that there is sufficient information in hand to warrant concern over those unassessed waters and the slow pace at which many waters are attaining water quality standards.

The 1998 section 303(d) lists of impaired waterbodies submitted by States and Territories provided additional information. The section 303(d) lists relied, in part, on information in the section 305(b) reports. The States and Territories identified over 20,000 individual waterbodies including river and stream segments, lakes, and estuaries that do not attain State water quality standards despite 28 years of pollution control efforts. These impaired waterbodies include approximately 300,000 miles of river and shoreline and approximately 5 million acres of lakes. Approximately 210 million people live within 10 miles of these waterbodies. State and local governments also reported that they

issued 2,506 fish advisories and closed 353 beaches in 1998.

EPA believes that a significant part of the response to these problems must be a more rigorous implementation of the TMDL program. EPA believes that today's rule will provide the tools for States, Territories and authorized Tribes to bring the assessment and restoration authorities provided by section 303(d) into greater use and result in significant improvements in the quality of the Nation's waterbodies.

2. What are the Current Statutory Authorities That Support This Final Rule?

The goal of establishing TMDLs is to assure that water quality standards are attained and maintained. Section 303(d) of the CWA which Congress enacted in 1972 requires States, Territories and authorized Tribes to identify and establish a priority ranking for waterbodies for which technology-based effluent limitations required by section 301 are not stringent enough to attain and maintain applicable water quality standards, establish TMDLs for the pollutants causing impairment in those waterbodies, and submit, from time to time, the list of impaired waterbodies and TMDLs to EPA. EPA must review and approve or disapprove lists and TMDLs within 30 days of the time they are submitted. If EPA disapproves a list or a TMDL, EPA must establish the list or TMDL. In addition, EPA and the courts have interpreted the statute as requiring EPA to establish lists and TMDLs when a State fails to do so. Furthermore, the requirement to identify and establish TMDLs for waterbodies exists regardless of whether the waterbody is impaired by point sources, nonpoint sources or a combination of both. *Pronsolino* v. *Marcus*, 2000 WL 356305 (N.D. Cal. March 30, 2000.)

Listing impaired waterbodies and establishing TMDLs for waterbodies impaired by pollutants from nonpoint sources does not mean any new or additional implementation authorities are created. Once a TMDL is established, existing State, Territorial and authorized Tribal programs, other Federal agencies' policies and procedures, as well as voluntary and incentive-based programs, are the basis for implementing the controls and reductions identified in TMDLs.

CWA Section 402 establishes a program, the NPDES Program, to regulate the "discharge of a pollutant," other than dredged or fill materials, from a "point source" into "waters of the United States." The CWA and NPDES regulations define a "discharge of a pollutant," "point source," and "waters of the United States." The NPDES Program is administered at the federal level by EPA unless a State, Tribe or U.S. Territory assumes the program after receiving approval by the federal government. Under section 402, discharges of pollutants to waters of the United States are authorized by obtaining and complying with the terms of an NPDES permit. NPDES permits commonly contain numerical limits on the amounts of specified pollutants that may be discharged and specified best management practices (BMPs) designed to minimize water quality impacts. These numerical effluent limitations and BMPs or other non-numerical effluent limitations implement both technology-based and water quality-based requirements of the Act. Technology-based limitations represent the degree of control that can be achieved by point sources using various levels of pollution control technology. If necessary to achieve compliance with applicable water quality standards, NPDES permits must contain water quality-based limitations more stringent than the applicable technology-based standards.

3. What is the Regulatory Background of Today's Action?

a. What are the Current Requirements?

EPA issued regulations governing identification of impaired waterbodies and establishment of TMDLs, at § 130.7, in 1985 and revised them in 1992. These regulations provide that:

- State, Territorial and authorized Tribal lists must include those waters still requiring TMDLs because technology based effluent limitations required by the CWA or more stringent effluent limitations and other pollution controls (*e.g.*, management measures) required by local, State, or Federal authority are not stringent enough to attain and maintain applicable water quality standards;
- State, Territorial and authorized Tribal lists must be submitted to EPA every two years, beginning in 1992, on April 1 of every even-numbered year;
- The priority ranking for listed waters must include an identification of the pollutant or pollutants causing or expected to cause the impairment and an identification of the waterbodies targeted for TMDL development in the next two years;
- States, Territories and authorized Tribes, in developing lists, must assemble and evaluate all existing and readily available water quality-related data and information;
- States, Territories and authorized Tribes must submit, with each list, the methodology used to develop the list and provide EPA with a rationale for any decision not to use any existing and readily available water quality-related data and information; and
- TMDLs must be established at levels necessary to implement applicable water quality standards with seasonal variations and a margin of safety that takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

The regulations define a TMDL as a quantitative assessment of pollutants that cause water quality impairments. A TMDL specifies the amount of a particular pollutant that may be present in a waterbody, allocates allowable pollutant loads among sources, and provides the basis for attaining or maintaining water quality standards. TMDLs are established for waterbody and pollutant combinations for waterbodies impaired by point sources, nonpoint sources, or a combination of both point and nonpoint sources. Indian Tribes may be authorized to establish TMDLs for waterbodies within their jurisdiction. To date, however, no Tribe has sought or received CWA authority to establish TMDLs.

The NPDES regulations, in several provisions and under certain circumstances, allow the permitting authority and/or EPA to subject certain previously non-designated sources to NPDES program requirements. EPA established these jurisdictional regulations in 1973 when the Agency and the States focused permitting resources primarily on continuous discharges, for example, industrial and municipal sources. Also, in the early stages of CWA implementation, the Agency and the States focused on implementation of technology-based standards. At that time, EPA attempted to limit the scope of the NPDES permitting program to certain types of point sources. The D.C. Circuit rejected that attempt, however, and explained that EPA could not exempt point sources from the NPDES program. *NRDC* v. *Costle*, 568 F.2d 1369, 1377 (D.C. Cir. 1977). Although the Court rejected this attempt, it did recognize the Agency's discretion to define "point source" and "nonpoint source." The existing NPDES regulations identifying animal production and silvicultural sources represents an early attempt to do so.

Also, under the NPDES program regulations, a Regional Administrator may review and object to State-issued NPDES permits. The procedures by which a Regional Administrator may review and object to these permits are found in § 123.44. The existing objection authority, under section 402(d) of the Act, grants EPA 90 days within which to object to a proposed State permit that fails to meet the guidelines and requirements of the Act.

If a State fails to respond to an EPA objection within 90 days of objection, exclusive authority to issue the NPDES permit to that discharger passes to EPA.

b. What Changes Did EPA Propose in August 1999?

In 1996, the Office of Water determined that there was a need for a comprehensive evaluation of EPA's and State, Territorial and authorized Tribal implementation of section 303(d) requirements. EPA convened a committee under the Federal Advisory Committee Act (TMDL FACA committee) to undertake such an evaluation and make recommendations for improving implementation of the TMDL program, including recommendation for revised regulations and guidance. The TMDL FACA committee included 20 individuals with diverse backgrounds, including agriculture, forestry, environmental advocacy, industry, and State, local, and Tribal governments. On July 28, 1998, the committee submitted its final report to EPA which contained more than 100 consensus recommendations, a subset of which recommended regulatory changes. The TMDL FACA committee recommendations helped guide the development of the revisions which EPA proposed in August 1999.

In proposing revisions to the regulations governing TMDLs, EPA also relied upon the past experience of States and Territories. EPA's proposal recognized and responded to some of the issues raised by stakeholders regarding the effectiveness and consistency of the TMDL program. EPA also proposed changes intended to resolve some of the issues and concerns raised by litigation concerning the identification of impaired waterbodies and the establishment of TMDLs. Finally, EPA proposed changes to the NPDES permitting regulations to assist in the establishment and implementation of TMDLs and to better address point source discharges to waters not meeting water quality standards prior to establishment of a TMDL.

Key elements of the changes proposed in August, 1999 include:

- State, Territorial, and authorized Tribal section 303(d) listing methodologies would become more specific, subject to public review, and provided to EPA for review prior to submission of the list.
- States, Territories and authorized Tribes would develop a more comprehensive list of waterbodies impaired and threatened by pollution, organize it into four parts, and submit it to EPA.
- States, Territories and authorized Tribes would establish TMDLs only for waterbodies on the first part of the list.
- States, Territories and authorized Tribes would keep waterbodies on the lists until water quality standards were achieved.
- States, Territories and authorized Tribes would establish and submit to EPA schedules to establish all TMDLS within 15 years of listing.
- States, Territories, and authorized Tribes would rank TMDLs into high, medium or low priority.
- TMDLs would include 10 specific elements, one of which is an implementation plan.
- States, Territories, and authorized Tribes would notify the public and give them the opportunity to comment on the methodology, lists, priority rankings, schedules, and TMDLs prior to submission to EPA.
- New and significantly expanded discharges subject to NPDES permits would need to obtain an offset for the increased discharge before being allowed to discharge the increase.
- Certain point source storm water discharges from silviculture would be required to seek a permit if necessary to implement a TMDL.
- EPA could designate certain animal feeding operations and aquatic animal production facilities as sources subject to NPDES permits in authorized States.
- EPA could object to expired and administratively continued State-issued NPDES permits.
- Regulatory language would codify requirements pertaining to citizens' rights to petition EPA.

c. What has EPA Done to Gather Information and Input as it Developed This Final Rule?

EPA published the proposed rule on August 23, 1999, and provided for an initial 60 day comment period, which was later extended to a total of 150 days. EPA received about 34,000 comments on the proposal comprised of about 30,500 postcards, 2,700 letters making one or two points, and 780 detailed comments addressing many issues. EPA has reviewed all these comments as part of the development of today's final rule.

EPA also engaged in an extensive outreach and information-sharing effort following the publication of the proposed rule. The Agency sponsored and participated in six public meetings nationwide, to better inform the public on the contents of the proposed rules, and to get informal feedback from the public. These meetings took place in Denver, Los Angeles, Atlanta, Kansas City, Seattle, and Manchester, New Hampshire. In addition, EPA participated in numerous other meetings, conferences and information-sharing sessions to discuss the proposed rule and listen to alternative approaches to achieving the nation's clean water goals.

The Agency has had an ongoing dialogue with State and local officials and their national/regional organizations throughout the development of this rule. EPA has met with organizations representing State and local-elected officials including: the National Governors' Association, the Western Governors' Association, the National Conference of State Legislatures, the National Association of Counties, the National League of Cities and EPA's State and Local Advisory Group. Many discussion sessions were held with officials who administer State and local programs related to water quality, agriculture, forestry, and harbors. Discussions were held with such organizations as the Environmental Council of the States, the Association of State and Interstate Water Pollution Control Administrators, the Association of Municipal Sewerage Agencies, the Association of Municipal Water Agencies, the National Association of State Agricultural Departments, the National Association of State Foresters, the Western States Water Council, the Association of State Drinking Water Administrators, the National Association of Flood and Storm Water Management Agencies, the Interstate Conference on Water Policy, and the Western States Land Commissioners

EPA met with groups representing business, industry, agriculture, and forestry interests, including the Electric Power Research Institute, the Utility Water Action Group, American Water Works Association, the American Forest and Paper Association, the Family Farm Alliance, the National Association of Conservation Districts, a number of State Farm Bureaus, corn and soybean grower organizations and forestry associations. EPA also met with environmental and citizen groups including the Natural Resources Defense Council, Sierra Club, Friends of the Earth and Earth Justice. EPA participated in numerous Congressional briefings and hearings held in Washington and in several field locations. The results of these meetings and discussions are reflected in today's rule.

B. What are the Significant Issues in Today's Rule?

1. What are EPA's Objectives for Today's Rule?

States, Territories, and authorized Tribes are essential in carrying out a successful program and EPA looks forward to working with them in developing this program. Further, we believe that, ultimately, any successful effort depends on a cooperative approach that pulls together the variety of entities and stakeholders involved in the watershed. EPA through this rulemaking seeks to provide a framework that facilitates this approach.

EPA received many comments regarding the overall purpose of the proposed rule. Many commenters expressed concerns that EPA was putting too much emphasis on TMDLs and ignoring other programs and initiatives under the CWA which are also aimed at restoring or maintaining water quality. A common theme through many comments was that the Agency should not attempt to force-fit clean up of every impairment through the TMDL process. EPA agrees with the commenters that for some waterbodies and watersheds, existing plans and agreements may accomplish much of what this rule intends. However, EPA believes that identifying waterbodies that are impaired and establishing TMDLs is both statutorily required and will help focus ongoing activities for more efficient attainment of water quality standards.

The CWA requires TMDLs for pollutants in impaired waterbodies if implementation of technology-based effluent limitations is not sufficient to attain water quality standards. Today's rule clarifies this concept to require that TMDLs be established for all pollutants in impaired waterbodies unless enforceable Federal, State, Territorial or authorized Tribal controls will result in attainment of water quality standards by the time the next list in the listing cycle is required.

EPA recognizes that watershed or other plans developed under other State, Territorial or authorized Tribal programs or by other Federal agencies, such as wet weather flow plans, Coastal Zone Management plans, or conservation plans administered by the Natural Resources Conservation Service, have the same goal as a TMDL. EPA believes that these other activities are crucial to the attainment of water quality standards either because they will result in attainment of water quality standards before a TMDL is established or because they are the basis for implementation of the controls required by TMDLs. Thus, today's rule provides a role for the various programs aimed at improving water quality—both as an alternative to developing a TMDL in certain circumstances, and a means for implementing TMDLs.

Many commenters also perceived EPA's proposal as an attempt to supplant State, Territorial or authorized Tribal primacy. Today's rule preserves the primary responsibilities of States, Territories and authorized Tribes and clarifies EPA's responsibilities under the CWA. EPA believes that today's rule provides greater clarity regarding the requirements for States, Territories and authorized Tribes and EPA's own responsibilities for the TMDL program. EPA believes that today's rule establishes a framework for effective, cooperative efforts between State, Territorial, authorized Tribal governments, individuals, local governments and other Federal agencies.

EPA is also conscious of the need for adequate resources. EPA has sought to increase funding for development and implementation of TMDLs in both the FY 2001 Federal budget and prior budgets. In the FY 2001 Federal budget the Agency has requested an additional $45 million in CWA Section 106 grants specifically for the TMDL program. In FY 2001, EPA requested $250 million for section 319 nonpoint source grants, an increase of $50 million (25%) over FY 2000. In addition, the FY 1999 and FY 2000 budgets of $200 million per year for section 319 grants represented a doubling (100% increase) of the prior section 319 funding. To further support State nonpoint source implementation, EPA has proposed an FY2002 budget that gives States and Territories the option to reserve up to 19% of their Clean Water State Revolving Fund capitalization grants to provide grants for implementing nonpoint source and estuary management projects.

2. What Are the Key Differences Between the Proposal and Today's Final Rule?

This section summarizes the significant changes EPA has made in the rule adopted today compared to the proposed rule. A more detailed discussion of all the changes is included in the specific sections for these changes in this preamble.

a. Threatened waterbodies. EPA proposed that threatened waterbodies be listed on Part 1 of the list, meaning that TMDLs would have to be established for them as for impaired waters. After carefully considering comments, particularly the concerns raised by commenters regarding the technical difficulties inherent in determining when water quality trends are declining and the difficulty in making listing decisions, EPA is not requiring that States, Territories or authorized Tribes list threatened waterbodies on the section 303(d) list or that TMDLs be prepared for these waterbodies. States, Territories and authorized Tribes retain, at their discretion, the option to list threatened waterbodies on their section 303(d) list and establish TMDLs for these waterbodies.

b. The four-part 303(d) list. EPA proposed that the section 303(d) list include all impaired waterbodies, sorted into four parts, and a priority ranking for those waterbodies with respect to establishing TMDLs. Part 1 of the list would include impaired waterbodies for which TMDLs would be required to be established within 15 years. Part 2 of the list would include waterbodies impaired by pollution that is not caused by a pollutant. TMDLs would not be required for these waterbodies. Part 3 of the list would include waterbodies for which TMDLs had been established but water quality standards not yet attained. Part 4 would include waterbodies for which technology-based controls or other enforceable controls would attain water quality standards by the next listing cycle. Today's final rule adds a clarification that if during the development of each list, a waterbody previously listed on Part 3 of the list has not made substantial progress towards attainment of water quality standards, it must be moved to Part 1 and a new TMDL must be established. Today's rule also allows States, Territories and authorized Tribes to submit their list in different formats. EPA will still approve all four parts of the list, but States, Territories and authorized Tribes may submit lists in any of three formats. Lists may be submitted to EPA as described in the proposal—that is, as one four-part list published by itself, as part of the section 305(b) water quality report, or with Part 1 submitted separately to EPA as a section 303(d) submission and Parts 2, 3 and 4 submitted to EPA as a section 303(d) component of the section 305(b) water quality report.

c. Inclusion of schedules in the section 303(d) list. EPA proposed that States, Territories and authorized Tribes should submit the list and priority rankings to EPA for approval, and should separately submit a schedule for establishing TMDLs which would not be subject to EPA approval. Today's rule requires States, Territories, and authorized Tribes to submit a prioritized schedule for establishing TMDLs for waterbodies listed on Part 1. Further, as

suggested by some commenters, the final regulations require that TMDL establishment be scheduled as expeditiously as practicable and within 10 years of July 10, 2000, or 10 years from the due date for the first list on which the waterbody appeared, whichever is later, rather than the 15 year period EPA proposed. However, the schedule can be extended for up to 5 years when a State, Territory, or authorized Tribe explains that despite expeditious action establishment of TMDLs within 10 years is not practicable.

d. Implementation plan. EPA proposed that TMDLs must contain an implementation plan as a required element for approval. Today's rule, like the proposal, requires an implementation plan as a mandatory element of an approvable TMDL, and includes substantial changes to the reasonable assurance and implementation plan requirements in response to the comments received. The implementation plan requirements differ depending on whether waterbodies are impaired only by point sources subject to an NPDES permit, only by other sources (including nonpoint sources), or by both. EPA is also adding specificity regarding when the NPDES permits implementing wasteload allocations must be issued. Finally EPA is establishing a goal of 5 years for implementing management measures or control actions to achieve load allocations, and a goal of 10 years for attaining water quality standards.

e. Reasonable assurance. EPA proposed that States, Territories and authorized Tribes provide reasonable assurance that the wasteload and load allocations reflected in TMDLs would be implemented. Today's final rule clarifies how reasonable assurance can be demonstrated for waterbodies impaired by all pollutant sources, and provides additional detail on how reasonable assurance can be demonstrated for nonpoint sources. These changes reflect and seek to address the uncertainties inherent in dealing with nonpoint pollutant sources and recognize the importance of voluntary and incentive-based programs. Finally, today's rule specifies how EPA will provide reasonable assurance when it establishes TMDLs.

f. The petition process. EPA proposed to codify requirements applicable to petitions which can be filed with the Administrator by citizens who believe that EPA has failed to comply with its TMDL responsibilities under the CWA. Today's rule does not include requirements codifying the petition process. EPA notes, however, that eliminating the proposed petition process from the rule does not change the fact that any person is entitled, under the Administrative Procedure Act (APA), to petition EPA to take specific actions regarding identification of impaired waterbodies and establishment of TMDLs.

g. Offsets. EPA proposed to require new and significantly expanded discharges subject to the NPDES permit program to obtain an offset for their increased load before being allowed to discharge the increase. Today's rule does not include any requirement for an offset.

h. Silviculture, Animal Feeding Operations, and Aquatic Animal Production Facilities. EPA proposed to allow EPA and States to designate certain point source storm water discharges from silviculture as subject to the NPDES permitting program. EPA also proposed to allow EPA to designate certain animal feeding operations and aquatic animal production facilities as point sources in NPDES authorized states. EPA has decided to withdraw this proposal.

II. Changes to Part 130

This section explains in detail the elements of the final Part 130 TMDL regulations and how these regulations differ from the proposal. EPA has made several significant changes to the proposal, clarified other requirements, and rewritten and reorganized the regulatory language. Most of these changes have been made in response to comments received on the proposed rule.

A. What Definitions are Included in This Final Rule? (§ 130.2)

Today's final action revises the definitions of load (or loading), load allocation, wasteload allocation, and TMDL, and adds definitions for the terms pollutant, total maximum daily thermal load, impaired waterbody, thermal discharge, reasonable assurance, management measures, waterbody, and list. In addition, for reasons explained in detail later in this section EPA has decided not to promulgate definitions which were not proposed but were suggested by the commenters.

1. What Definitions are Added or Revised?

a. New Definition of Pollutant (§ 130.2(d))

What did EPA propose? On August 23, 1999, EPA proposed to add a definition for "pollutant" that was the same as the definition in the CWA at section 502(6). EPA also proposed to clarify that, in EPA's view, the definition of pollutant would encompass drinking water contaminants that are regulated under section 1412 of the Safe Drinking Water Act and that may be discharged to waters of the U.S. that are the source water of one or more public water systems. EPA was proposing to clarify that drinking water contaminants that meet these criteria are pollutants as defined in the CWA.

What comments did EPA receive? EPA received many comments on this proposed definition which are addressed fully in the Response to Comment Document included in the Docket. Most commenters offered suggestions as to which particular substances (particularly naturally occurring pollutants, FIFRA registered pesticides, and flow) may or may not be pollutants, and requested specific recognition of these substances in the definition. Others objected to inclusion of drinking water contaminants in the definition, believing that they were better addressed by the Safe Drinking Water Act requirements. In addition, EPA received several requests for more examples to help clarify the distinction between pollutants and pollution. Some commenters understood EPA to propose that "pollutant" includes non-point source pollution while others did not. Others gave examples of situations where they believed it would be impossible to decide whether a waterbody was impaired by pollution or a pollutant. Examples given included: biological impairment due to displacement of bedload sediment during high intermittent streamflow caused by increased impervious surface, and impairment due to low dissolved oxygen levels in hydropower releases.

What is EPA promulgating today? EPA is promulgating a definition of pollutant that is identical to the definition in EPA's current NPDES regulations. That definition is identical to the CWA definition except that it excludes certain radioactive materials from the definition. *Train* v. *Colorado Public Int. Research Group,* 426 U.S. 1, 25 (1976) (Congress did not intend for materials governed by the Atomic Energy Act to be included in the category of pollutants subject to regulation by EPA under the CWA). In recognition that the CWA definition does not expressly discuss drinking water contaminants, EPA is not including a reference to drinking water contaminants in the final language. However, EPA interprets the CWA definition of pollutant to include, in most cases, drinking water contaminants that are regulated under

section 1412 of the Safe Drinking Water Act (SDWA). This interpretation is consistent with both the language and the intent of the CWA. First, drinking water contaminants fall within the meaning of one or more of the terms used by Congress to define pollutant. Second, the term "public water supplies" is listed under CWA section 303(c)(2)(A) as a potential beneficial use to be protected by water quality standards. EPA expects that virtually all drinking water contaminants that are regulated in the future will be encompassed by one of or more of the terms used to define pollutants.

EPA wishes to clarify the relationship between pollutants and pollution for purposes of section 303(d). Pollution, as defined by the CWA, and the current regulations is "the man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of a waterbody." This is a broad term that encompasses many types of changes to a waterbody, including alterations to the character of a waterbody that do not result from the introduction of a specific pollutant or the presence of pollutants in a waterbody at a level that causes an impairment. In other words, all waterbodies which are impaired by human intervention suffer from some form of pollution. In some cases, the pollution is caused by the presence of a pollutant, and a TMDL is required. In other cases it is caused by activities other than the introduction of a pollutant.

The following are two examples of pollution caused by pollutants. The discharge of copper from an NPDES regulated facility is the introduction of a pollutant into a waterbody. To the extent that this pollutant alters the chemical or biological integrity of the waterbody, it is also an example of pollution. (Copper is not likely to cause an alteration to the water's physical integrity.) Similarly, landscape actions that result in the introduction of sediment into a waterbody constitute pollution when that sediment (which is a pollutant) results in an alteration of the chemical, physical, or biological integrity of the waterbody. TMDLs would have to be established for each of these waterbodies.

Degraded aquatic habitat is evidence of impairment which may be caused solely by channelization of a stream's bottom. In this case the waterbody would be considered impaired by pollution that is not a result of the introduction or presence of a pollutant. However, if the channelization also caused the bottom to become smothered by excessive sediment deposition, then the waterbody impairment is caused by a pollutant (sediment) and a TMDL would be required.

Based on data contained in the 1998 section 303(d) lists, EPA believes that many waterbodies that fail to attain water quality standards, fail to do so because a specific substance or material, a pollutant, has been or is being introduced into the waterbody. EPA believes the vast majority of impairments are caused by the introduction of pollutants and does not anticipate large numbers of waterbodies to be identified as impaired only by pollution. Of the top 15 categories of impairment identified on the 1998 section 303(d) lists, 11 categories are directly or indirectly associated with pollutants: sediments, pathogens, nutrients, metals, low dissolved oxygen, temperature, pH, pesticides, mercury, organics, and ammonia. Together, these categories account for 77% of the total impairments listed. In comparison, three of the top 15 categories either are not associated with pollutants or the link to pollutants is generally unknown: habitat alterations, impaired biologic communities and flow alterations. These categories account for only 12% of the total number of listed impairments.

While TMDLs are not required to be established for waterbodies impaired by pollution but not a pollutant, they nonetheless remain waterbodies which fail to attain or maintain water quality standards. EPA believes that States, Territories and authorized Tribes should use approaches and institute actions other than TMDLs to begin the task of returning these waterbodies to full attainment of water quality standards. As explained later in the preamble, one of the reasons for including these waterbodies on Part 2 of the list is to ensure that they remain in the public's eye and are not simply ignored.

Another frequently asked question concerns pollutants that are "natural." Water quality standards often fail to distinguish between pollutants that are introduced into a waterbody as the result of some human activity and those that are present in a waterbody due to natural processes such as weathering of metals from geologic strata. Where a natural pollutant occurs along with an anthropogenic pollutant, they both must be accounted for within the TMDL so that the TMDL is established at a level that will implement the water quality standards. For example, cadmium originating from the natural weathering of a geologic outcrop, as well as cadmium from a mine tailings pond, must be accounted for in the wasteload allocation of a TMDL to ensure that the wasteload allocation is properly set to achieve water quality standards. EPA recognizes that there may be instances where the introduction of natural substances alone may cause the waterbody to exceed the water quality standards unless the standard contains an exception for addressing such situations. In those circumstances, EPA encourages States, Territories, and authorized Tribes to revise their water quality standards to reflect and recognize the presence and effect of substances that occur naturally.

EPA does not believe that flow, or lack of flow, is a pollutant as defined by CWA Section 502(6). Some commenters have urged EPA to revise the proposed regulations to require TMDLs for all forms of pollution, including hydromodification, which reduce the amount of water flowing through a river or stream. They argue that since low flow can lead to non-attainment of water quality standards, *e.g.,* use as a fishery, waterbodies impacted by low flow should be listed on Part 1 and have TMDLs established for them. While EPA believes that waterbodies which do not attain and maintain water quality standards solely because of low flow must be identified on Part 2 of a State's section 303(d) list, it does not believe section 303(d)(1)(C) requires that States must establish TMDLs for such waters. This is because EPA interprets section 303(d)(1)(C) to require that TMDLs be established for "pollutants" and does not believe "low flow" is a pollutant. Section 303(d)(1)(C) provides that States shall establish TMDLs "for those pollutants" which the Administrator identifies as suitable for such calculation. In 1978, EPA said that all pollutants under proper technical permit conditions were suitable for TMDL calculations. However, low flow is not a pollutant. It is not one of the items specifically mentioned in the list of pollutants Congress included at section 502(6) of the CWA. Nor does it fit within the meaning of any of those terms.

Instead, low flow is a condition of a waterbody (*i.e.,* a reduced volume of water) that when man-made or man-induced would be categorized under the CWA as pollution, provided it altered the physical, biological and radiological integrity of the water. Many forms of human activity, including the introduction of pollutants, can cause water pollution. Not all pollution-causing activities, however, must be analyzed and allocated in a TMDL. Section 303(d) is a mechanism that requires an accounting and allocation of pollutants introduced into impaired waters (whether from point or nonpoint

sources). If low flow in a river, even if man-induced, exacerbates or amplifies the impairing effect of a pollutant in that river by increasing its concentration, that factor is to be accounted for and dealt with in the TMDL by calculating and allocating the total pollutant load in light of, among other things, seasonal variations in flow. However, where no pollutant is identified as causing an exceedance of water quality standards, EPA does not believe the CWA requires a TMDL to be established.

The Supreme Court's decision in *PUD. No 1 of Jefferson County et al.* v. *Washington Dept. of Ecology et al.*, 511 U.S. 700 (1994), does not compel a different result. In that case a city and local utility district wanted to build a dam on the Dosewallips river in Washington State. The project would divert water from the river to run the dam's turbines and then return the water to the river below the dam. To protect salmon populations in the river, the state imposed a minimum flow requirement as part of its CWA section 401 certification of the project. The Court determined that compliance with section 303(c) water quality standards is a proper function of a section 401 certificate. Accordingly, the Court concluded that pursuant to section 401, the state may require the dam project to maintain minimum stream flow necessary to protect the river's designed use as salmon habitat.

The Supreme Court in *Jefferson County* did not interpret section 303(d) and did not hold that TMDLs had to be established for flow-impacted waters. The Court did reject petitioner's claim that the CWA is only concerned with water "quality" and does not allow the regulation of water "quantity." Like EPA, it recognized that water quantity may be closely related to water quality and that reduced stream flow may constitute "pollution" under the Act. However, in holding that section 401 certification applied to dam projects as a whole—including pollution-causing water withdrawals—and not just discharges of pollutants, the Court did not decide that a section 303(d) TMDL must be established for low flow-impaired waterbody. This is because *Jefferson County* did not decide that low flow was a pollutant. Under section 303(d) it is pollutants, not pollution, for which TMDLs must be established.

However, EPA recognizes that there will be cases where flow or lack thereof will enhance the ability of a pollutant to impair a waterbody. EPA has provided for this eventuality by requiring that States, Territories and authorized Tribes consider seasonal variations, including flow, when establishing TMDLs. (See discussion at § 130.32(b)(9).)

Also, EPA declines at this time to define "chemical wastes" as that term appears in the definition of "pollutant" to exclude pesticides designated for aquatic uses. EPA recognizes that the requirements of section 303(d) and this rule may lead to waterbodies being listed due to the presence of pesticides registered under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) because water quality standards for that chemical are exceeded. EPA will continue to evaluate the interface between its regulatory responsibilities under FIFRA and the CWA.

Note: EPA erroneously listed "pollution" as a proposed new definition in the preamble to the proposal. In fact, the definition of pollution is included in the current rules and has been revised by simply adding a citation of the CWA section defining that term.

b. Revised Definition of Loading (§ 130.2(e))

What did EPA propose? EPA proposed to make a grammatical revision to the definition of "load or loading" by using the words "loading of pollutant" to clarify that loading is the introduction of a pollutant whether man-made or naturally-occurring rather than as a parenthetical explanation of what is man-caused loading. EPA did not consider this change substantive and did not discuss it in the preamble to the proposed rule.

What comments did EPA receive? Some commenters expressed concern about perceived inconsistencies between (1) the proposed definition of loading and the expression of a TMDL at proposed § 130.34 and (2) between this definition and the proposed definition of a TMDL at § 130.2(h)(2). Other commenters requested revisions to clarify that the load describes when the water quality standard is attained, that the definition does not apply to nonpoint sources, or that ambient temperature increases are not a load. Another commenter suggested that EPA include the definition of load capacity included in the current requirements which EPA did not include in the proposal.

What is EPA promulgating today? EPA has carefully considered these comments but is promulgating this definition as proposed. EPA does not believe that there are inconsistencies between the definition and the manner in which TMDLs may be expressed pursuant to § 130.33. EPA does not interpret the final rule to require that TMDLs be always expressed as the load or load reduction of the pollutant causing the impairment. The final rule at § 130.33(b)(4) preserves the flexibility to express the TMDL as a quantitative expression of a modification to a characteristic of the waterbody that results in a certain load or load reduction. Similarly, EPA does not believe there are inconsistencies between the proposed definition of load as a substance or matter introduced in a waterbody and the proposed definition of a TMDL at § 130.2(h)(2) which would have required identification and quantification of the load "that may be present" in the waterbody. TMDLs are generally established using the principle of mass balance, which is the core principle of water quality modeling. The mass of a pollutant in a waterbody is a function of the mass introduced into the waterbody and the mass that flows out of the waterbody. The same principle applies for thermal energy.

EPA sees no inconsistency between describing loading as an introduction of a substance or matter into a waterbody and requiring identification of the pollutant load present within the waterbody for the purpose of establishing TMDLs. The characterization of a mass of material as a load into, or a load within, a waterbody will depend in some instances on how the State, Territory, or authorized Tribe decides to frame the TMDL.

EPA is not revising the definition of load to suggest that the load describes when the water quality standard is attained. The definition of "load or loading" merely refers to the quantity of matter or thermal energy introduced into a waterbody; it is not intended to include an interpretation of the environmental consequence of that load. It is the calculation of the TMDL and the resulting allocations which establish the loading targets necessary to achieve water quality standards.

EPA is not revising the definition of load or loading to exclude nonpoint sources. As noted above, EPA believes that section 303(d) applies to all sources including nonpoint sources, and that all sources are considered when allocations needed to attain or maintain water quality standards are established. EPA has consistently required the inclusion of pollutants from nonpoint sources in estimates of loading. By defining "load allocations" which pertain to nonpoint sources as "best estimate of loadings," the language of the current regulations clearly demonstrates that EPA intended for pollutants from nonpoint sources to be included in the definition of load and loading. Therefore, EPA believes it is simply a continuation of its policy to

consider the definition of loads to apply to nonpoint sources.

Similarly, EPA is not revising the definition of load or loading to exclude increases in temperature due to solar input. EPA does not believe that the source of a load should disqualify it from being a load. What needs to be done to mitigate heat load from solar input will be addressed by a State, Territory, or authorized Tribe when it establishes the TMDL.

Finally, EPA is not including the definition of load capacity contained in the existing regulations. EPA proposed to delete the definition of " load capacity" because retaining a separate definition of load capacity would only add confusion as to whether a TMDL consisted merely of the load capacity or the ten elements of the TMDL. The loading capacity is found as element three in the eleven elements of the TMDL. EPA continues to believe that retaining a separate definition of load capacity would only add confusion as to whether a TMDL consisted merely of the load capacity or the ten elements of the TMDL promulgated in today's regulation.

c. Revised Definition of Load Allocation (§ 130.2(f))

What did EPA propose? EPA proposed to simplify the existing definition of "load allocation" by defining it as simply the part of the total load in a TMDL that is allocated to nonpoint sources, including atmospheric deposition, or natural background sources, as opposed to wasteload allocation to point sources. In proposing this change, EPA moved the substantive requirement of how a load allocation is determined from the definition of load allocation to the description of a TMDL in proposed § 130.33(b).

What comments did EPA receive? EPA received a large number of comments with regard to its definition of load allocations, covering a range of issues. Again, many commenters asserted that EPA did not have the statutory authority to address pollutant loadings from nonpoint sources because Congress intended the TMDL provisions of the CWA to apply only to waterbodies impaired by point sources or waterbodies where control of point sources alone would result in attainment of water quality standards.

In contrast, many commenters supported the inclusion of pollutant loadings from nonpoint sources in the TMDL program. A frequently-cited reason for the need for such an approach was the commenters' belief that existing nonpoint source programs had so far failed to adequately address nonpoint source pollution. Numerous commenters urged EPA to require quantitative estimates of pollutant loadings from nonpoint sources, while acknowledging that doing so would be more difficult than for point sources.

Some commenters suggested that EPA retain the existing definition of load allocation, along with the definitions of wasteload allocation, loading capacity, and TMDL. These commenters believed that the current definitions provide more clarity as to how loadings are defined and allocated than did the proposed definitions.

Other commenters suggested that the definition of load allocation should not include specific reference to atmospheric deposition or natural background. These commenters contended that the technical uncertainties in linking atmospheric deposition sources to water quality and the lack of Clean Air Act authority to control atmospheric loadings would make it difficult to calculate and implement load allocations. Furthermore, the commenters contended that natural background cannot be reduced and therefore should not be part of the load allocation.

Several comments called for including point sources not covered by the NPDES permit program (such as certain types of storm water sources) under the load allocation portion of the TMDL, rather than the wasteload allocation portion.

What is EPA promulgating today? In response to comments, EPA is clarifying that pollutants from storm water runoff not regulated under NPDES must be accounted for in the load allocation. EPA is also clarifying that pollutants from other sources, such as groundwater, air deposition or background pollutants from upstream sources must be accounted for in the load allocation.

For the reasons discussed earlier in today's preamble, EPA continues to believe that the CWA requires TMDLs to consider loadings from nonpoint sources. For these reasons, EPA rejects the suggestions that EPA delete the definition of load allocation, and consider the TMDL to consist only of wasteload allocations for point sources regulated by NPDES permits. EPA also continues to believe that load allocations must reflect contributions from atmospheric deposition. Where these loads exist, they contribute to the overall load of a pollutant within a waterbody and must be accounted for in the TMDL. Otherwise, the sum of load and wasteload allocations will exceed the amount necessary for the waterbody to attain water quality standards. For these reason and the reasons expressed in the Response to Comment Document, EPA believes that load allocations must include pollutant loads from all sources not already reflected in the wasteload allocations.

EPA believes that, at a minimum, it is possible to determine the total of aggregated loadings from air deposition to a particular waterbody. As a result, EPA expects that States, Territories and authorized Tribes will initially develop load allocations based on nationwide reductions expected as a result of programs developed under the Clean Air Act, and any State-required reductions in emission from local sources. As techniques improve to quantify the relative contributions of different sources, EPA expects that States, Territories and authorized Tribes will more specifically identify air sources and the expected reduction from these sources.

EPA does not consider a loading to surface water from groundwater to necessarily be part of the background loading. The background loading in a TMDL is generally either the loading from upstream of the waterbody for which the TMDL is being established, or else is a loading to the waterbody that originates from natural, not anthropogenic, sources. Pollutants entering a waterbody from groundwater can originate from either natural or anthropogenic sources. For example, the chlorides in groundwater that seep into a waterbody can originate from the geological rock formations or from brine seeping from oil production wells. In either case, the load allocation will address these loadings as part of the load allocation.

EPA recognizes that by moving some of the details from the current definition of load allocation into the TMDL regulatory requirements of § 130.32, it has shortened the definition of load allocation in the current rule. EPA believes this is appropriate because the new § 130.32 provides sufficient additional information about the nature of a load allocation (and a wasteload allocation). EPA believes it is better to include this information in one place, and has selected to do so in § 130.32.

d. Revised Definition of Wasteload Allocation (§ 130.2(g))

What did EPA propose? EPA proposed to simplify the existing definition of "wasteload allocation" by defining it as simply the part of the total load in a TMDL that is allocated to a point source. In proposing this change, EPA moved the substantive requirement of how a wasteload allocation is

determined into the description of a TMDL in proposed § 130.33(b).

What comments did EPA receive? Some commenters said that wasteload allocations should include only loads from point sources covered by the NPDES permit program, but not include loads from point sources not covered by NPDES, such as some types of storm water. Other commenters indicated that all point sources should be included in the wasteload allocation, regardless of their status with regard to NPDES.

A significant number of commenters said EPA should retain language in the existing definition which states that wasteload allocations are a form of effluent limits. One commenter noted that wasteload allocations should be defined as allocated to individual, classes or groups of sources.

What is EPA promulgating today? Today's rule clarifies that only point sources subject to an NPDES permit need to be included in the wasteload allocation. All other sources of a pollutant, be they point source or nonpoint sources, are included in the load allocation. In 1985, when EPA published the definition contained in the existing regulations, all point source discharges were subject to an NPDES permit. The Water Quality Act of 1987, however, provided that not all storm water discharges from point sources were subject to NPDES permits. As a result, today some storm water discharges through point sources are not subject to NPDES requirements. Generally, these are storm water discharges that do not fall into the eleven categories of storm water associated with industrial activities or that are below the threshold of the storm water phase II regulations. To continue this approach, EPA is clarifying that wasteload allocations apply only to point source discharges which are or can be subject to an NPDES permit.

Also, EPA is clarifying that for waterbodies impaired by both point and nonpoint sources, anticipated load reductions from nonpoint sources may be taken into account in calculating the wasteload allocation. EPA received a number of comments stating that in such cases implementation of the TMDL may proceed on different schedules for point and nonpoint sources and supporting the recognition in the final rule of a such a phased approach to implementation of TMDLs (*i.e.* "phased TMDLs"). EPA interprets the term "phased TMDLs" to describe TMDLs where the wasteload allocations are based on expected reductions from sources other than those regulated by NPDES permits. A phased TMDL includes wasteload allocations that are based on those expected load allocations and includes a monitoring plan to verify the load reductions. See Guidance for Water Quality-Based Decisions: The TMDL process, EPA 440/4–91/001. EPA considers that the combination of requirements for reasonable assurance and the implementation plan in today's rule provide the structure for phased TMDLs. The definition of reasonable assurance provides the basis by which a State, Territory, or authorized Tribe can demonstrate that the load allocations in the TMDL are likely to occur. The implementation plan also requires that the TMDL establish a schedule or timetable which includes a monitoring or modeling plan to measure the effectiveness of point and nonpoint source control measures. Such a plan would include data collection, the assessment for water quality standards attainment, and, if needed, additional predictive modeling.

EPA recognizes it is difficult to ensure with precision that implementing nonpoint source controls will achieve expected load reductions. For example, management measures for nonpoint sources may not perform according to expectations to achieve expected pollutant load reductions despite best efforts. EPA believes that an important part of the phased approach, as discussed above, is the recognition that ultimate success in achieving water quality standards for nonpoint sources may depend upon an iterative approach. States, Territories and authorized Tribes may determine to what extent nonpoint source management measures are meeting the performance expectations on which they are based and implement improved management measures, designs or operations and maintenance procedures. Today's rule at § 130.32(c)(2)(v) provides for interim, measurable milestones for determining whether management measures or other action controls are being implemented, and a process for implementing stronger and more effective management measures if necessary. EPA recognizes that this type of approach might involve very long time-frames before water quality standards are eventually realized. EPA also expects that information on actual performance of management measures may lead to questions concerning the appropriateness of the water quality standards and that, in some cases, States, Territories and authorized Tribes may initiate use attainability analyses to determine the appropriate use and, possibly, revise the use on the basis of the information gathered during implementation phase of the TMDL.

EPA is deleting the sentence in the current definition that defines a wasteload allocation as a type of water quality based effluent limitation. EPA acknowledges that water quality-based effluent limitations that derive from a TMDL are based on the TMDL wasteload allocation, but does not believe that wasteload allocations serve as water quality based effluent limits. EPA explained this in its 1991 "Technical Support Guidance for Water Quality-based Toxics Control." Wasteload allocations reflect the mass load of a pollutant that allows a waterbody to attain water quality standards based on the averaging period of the water quality standard. For example, a wasteload allocation based on attaining the 4-day average water quality criterion for copper reflects a 4-day mass load. Effluent limitations reflect periods established by NPDES regulations: generally weekly and monthly limits for publicly owned treatment works and daily and monthly limits for other facilities (see § 122.45(d)) and therefore are not the strict equivalent of a wasteload allocation.

e. Revised Definition of TMDL (§ 130.2(h))

What did EPA propose? EPA proposed to define a "TMDL" as a written plan and analysis established to ensure that an impaired waterbody attains and maintains water quality standards in the event of reasonably foreseeable increases in pollutant loads. Under the proposed revisions, a TMDL would also have had to include ten basic elements, which were described in § 130.33(b) and are listed in section I.A.3.b. of this preamble. EPA's proposal was meant to amplify the existing regulatory definition that a TMDL is the sum of load and wasteload allocations and a margin of safety, taking into consideration seasonal variations.

What comments did EPA receive? EPA received numerous comments regarding its proposed changes to the definition of TMDLs. Specific comments regarding the ten proposed elements of a TMDL are addressed later in the discussion of § 130.32(b) of today's rule. Some commenters expressed concerns that the proposed definition expanded the concept of a TMDL beyond that mandated by section 303(d). Additional commenters suggested that section 303(d) requires TMDLs only for point sources, and suggested that the TMDL definition reflect this. Others interpreted the proposed definition as going beyond the statutory concept of a

TMDL as simply a calculation of the total load necessary to attain and maintain water quality standards. Further comments suggested that the proposed definition was too vague. All these commenters recommended that the existing definition be retained.

Some commenters supported the proposed definition and agreed that it was consistent with section 303(d). These commenters suggested that EPA clarify how the ten elements of the TMDL achieve the statutory concept, *i.e.,* quantify the sum of load and wasteload allocations with a margin of safety and take into consideration seasonal variations.

Further comments expressed concern that the proposed definition required a separate TMDL analysis for each pollutant causing an impairment and for each waterbody. Several commenters believed EPA has no authority to require TMDLs to address growth and recommended that references to growth be stricken from the definition.

What is EPA promulgating today? Today's rule modifies the proposal in a number of ways. EPA is adding the word "quantitative" to the final definition at § 130.2(f) to clarify that the TMDL must contain a quantified plan for allocating pollutant loads to attain and maintain water quality standards. EPA is also clarifying that a TMDL must assure that water quality standards are attained and maintained throughout the waterbody and in all seasons of the year. EPA believes this revision clarifies that the TMDL quantifies how water quality standards will be attained and maintained. As proposed and promulgated, the total effect of all the elements of the TMDL require a quantification of the sum of load and wasteload allocations, along with a margin of safety and consideration of seasonal variations, and EPA believes that the definition in the final rule is consistent with section 303(d). Also, EPA has reorganized the provisions of two of the elements and split one, such that there are now eleven elements of a TMDL; this change is discussed in the preamble discussion of § 130.32(b).

EPA declines to use the existing regulatory definition of TMDL as suggested by many comments for several reasons. Based on its experience in reviewing and approving TMDLs, EPA continues to believe that the TMDL elements in the final rule definition specify in appropriate detail the information EPA considers necessary to quantify loadings and determine whether the loadings, once implemented, would result in attainment of water quality standards in the waterbody. They will also provide EPA with an element missing from the current regulations, *i.e.,* assurance that the TMDL will in fact be implemented. EPA believes that this information will allow the Agency to make timely and appropriate decisions on TMDLs submitted for review. It will also provide certainty to States, Territories and authorized Tribes on what an approvable TMDL is. Furthermore, as previously discussed in today's preamble, section 303(d) applies to both point sources and nonpoint sources.

EPA is deleting the reference to reasonable foreseeable increases in pollutant loads from the proposed introductory paragraph in the definition, because these increases are addressed in the element of the TMDL that pertains to increases in pollutant loading. EPA addresses other comments and concerns about how TMDLs consider increases in pollutant loads in the Response to Comments document and in today's preamble discussion about § 130.32(b).

Finally, in the promulgated definition, EPA is clarifying that it considers a TMDL to apply to one pollutant in a waterbody. However, this does not mean that EPA requires a separate data collection, data analysis, or report for each TMDL. Instead, EPA encourages States, Territories, and authorized Tribes to establish TMDLs on a coordinated basis for a group of waterbodies within a watershed, and that a single analysis can be conducted for several pollutants, instead of for only a single pollutant. EPA does not construe the new definition of waterbody at § 130.2(q) to limit the ability of States, Territories and authorized Tribes to establish TMDLs on a watershed basis. In fact, EPA encourages coordinating the establishment of TMDLs on a watershed basis. Also, EPA did not intend to require that States, Territories, and authorized Tribes conduct a separate TMDL analysis for each pollutant in a waterbody or watershed. EPA wants to provide States, Territories and authorized Tribes the flexibility to develop and focus their TMDLs as appropriate, *i.e.,* to address single or multiple impairments in a waterbody, in part of a waterbody, or in multiple waterbodies.

f. New Definition of TMDTL (§ 130.2(i))

EPA is promulgating a definition of the term "total maximum daily thermal load" or TMDTL to help promote clarity with respect to the requirements which apply to TMDTLs. A TMDTL is a TMDL for a waterbody impaired by thermal discharge(s). In general, the same requirements for an approvable TMDL also apply to TMDTLs, since they are a subset of TMDLs. However, waterbodies with a thermal discharge will be evaluated for listing based on whether the waterbody is supporting a balanced, indigenous population of shellfish, fish, and wildlife. If such waters are listed, they will receive a TMDTL which must be calculated to assure protection and propagation of such a population.

g. New Definition of Impaired Waterbody (§ 130.2(j))

What did EPA propose? EPA proposed a definition of "impaired waterbody" to define precisely waterbodies which should be considered as not attaining water quality standards and proposed to include within that definition waterbodies impaired by unknown causes.

What comments did EPA receive? Many commenters objected to that part of the definition which required them to account for waterbodies impaired by unknown causes. They believed that the concept was too vague and too broad. They were concerned that some would argue that certain waterbodies should be deemed impaired when there was no evidence of impairment.

What is EPA promulgating today? In response to the comments, EPA is making a change to the proposed definition to clarify its intent regarding waterbodies impaired by unknown causes. EPA does not intend for States, Territories, and authorized Tribes to list waterbodies in the absence of any information demonstrating an impairment. Rather, by proposing to require listing of impaired waters even if the pollutant causing the impairment is unknown, EPA wanted to ensure that lack of information regarding the specific pollutant would not be a reason for not listing an impaired water. After consideration of the comments received, EPA has decided to modify the proposed provision. In situations where the specific pollutant is unknown, but there is information showing impairment, such information tends to consist of biological information (*e.g.,* information showing a water is not supporting a designated or existing aquatic life habitat use). Therefore, EPA is replacing the reference to unknown causes of impairments in the proposal with a provision requiring that waterbodies be considered impaired (and thus listed) when biological information indicates that they do not attain and maintain water quality standards. Prior to developing a TMDL for such waters, the State, Territory, or authorized Tribe would need to identify the particular pollutant causing the

impairment. EPA is aware that in past lists, some States, Territories, and authorized Tribes have identified broad categories of pollutants, such as metals or nutrients, as the cause of impairments. Under today's regulation, the only situation in which the State may identify the pollutant as unknown until such time that the TMDL is developed is for waters where the only information demonstrating impairment is biological information. EPA is developing guidance to assist States, Territories, and authorized Tribes to identify the causes of a biological impairment. See draft "Stressor Identification Guidance", April 28, 2000. Otherwise, EPA expects that States will be able to identify the particular metal, nutrient, or other pollutant causing the impairment.

EPA is also modifying the definition of impaired waterbody to include waters that fail to attain and maintain water quality standards. EPA is using the phrase "attain and maintain" to mean that the waterbody must consistently continue to meet water quality standards throughout the waterbody in order to be considered not impaired. Any failure to meet an applicable standard would mean that the waterbody should be listed and a TMDL should be developed if it is listed on Part 1. The use of the phrase "attain and maintain" can be distinguished from the proposed requirement to list threatened waters, which is not included in today's action. Threatened waters are those that are meeting standards, but exhibit a declining trend in water quality such that they would likely exceed standards in the future. Such waters are not required to be included on the section 303(d) list though States can do so. By waters that do not attain and maintain standards, EPA intends to ensure that States, Territories, and authorized Tribes list waters that may occasionally meet an applicable standard, but fail to consistently do so. As in the proposal, the Agency is including in the promulgated definition language from section 303(d)(1)(B) which establishes the standard for considering a waterbody impaired by thermal discharges, *i.e.,* the waterbody does not have or maintain a balanced indigenous population of shellfish, fish and wildlife. As discussed in the preamble to the proposed rule (64 FR 46021–46022, August 23, 1999) and later in today's preamble, EPA interprets section 303(d) to require TMDLs only for waterbodies impaired by pollutants.

Finally, EPA believes that the term impaired waterbodies is a plain language definition of the pre-existing regulatory term water quality limited segment which derived from the CWA. EPA interprets section 303(d) as pertaining to parts of or complete waterbodies that do not attain and maintain water quality standards. For these waterbodies technology-based controls are insufficient to attain water quality standards and water quality-based controls are required, *i.e.,* they are water-quality limited. Also in today's rule, EPA defines waterbody to include one or multiple segments of rivers, lakes, estuaries, etc. Thus, EPA believes that the term "impaired waterbodies" is analogous to the term water-quality limited segment and more understandable to the general public.

h. New Definition of Management Measures (§ 130.2 (m))

What did EPA propose? EPA did not propose a definition for "management measures." Instead, the proposed regulations used the term Best Management Practices (BMPs), a definition of which was carried over in the proposal from the current requirements.

What comments did EPA receive? Commenters pointed out that the definition of BMPs in the current regulations refers only to nonpoint sources, and they suggested that it should be revised to refer to all sources to which BMPs could be applied. These would include some point sources such as certain storm water discharges. Commenters also were concerned that the reference to BMPs as being selected by an agency would limit the applicability of certain BMPs in the context of establishing TMDLs.

What is EPA promulgating today? EPA agrees with the commenters that it intended the term BMPs in the proposal to include the management of sources other than nonpoint sources. However, rather than modify the pre-existing definition of BMP to accomplish that result, which could have unforeseen impacts on other Agency programs which use this term, EPA is including a definition of "management measures" in today's regulation. This term and definition retain those concepts in the current definition of BMPs which are applicable to TMDLs but eliminate the references to nonpoint sources and selection by an agency. EPAbelieves the definition of "management measure" is a logical outgrowth of the proposed definition of "BMP" and a reasonable response to the above-referenced comments.

i. New Definition of Thermal Discharge (§ 130.2(o))

What did EPA propose? EPA proposed adding the definition of "thermal discharge" to clarify the meaning of the term for the purpose of identifying impaired waterbodies and establishing Total Maximum Daily Thermal Loads (TMDTLs) pursuant to section 303(d). EPA proposed to define the term as "the discharge of heat from a point source." EPA believed that the definition was important since waterbodies impaired by thermal discharge are subject to section 303(d) listing and TMDTL requirements, and furthermore, the test for measuring successful implementation is different than for other pollutants.

What comments did EPA receive? EPA received several comments on this definition. Some comments requested clarification of whether EPA meant discharge of heat from all point sources. Other comments suggested that the definition be revised to include nonpoint sources of heat.

What is EPA promulgating today? EPA is promulgating the proposed definition with a minor change to clarify that it applies to only those point sources "that are required to have NPDES permits." EPA provided detailed explanations in the preamble to the proposal regarding its interpretation of the statute as it pertains to inclusion of thermal discharges in the TMDL program. (64 FR 46017 August 23, 1999). As discussed in the preamble to the proposed rule, EPA believes the CWA reference to "balanced, indigenous population of shellfish, fish and wildlife" refers only to those discharges subject to sections 301 and 306, which relate to point sources subject to NPDES permits. Therefore EPA is not expanding the definition of thermal discharge to include nonpoint sources. EPA acknowledges that nonpoint sources and other sources not subject to NPDES permits can introduce heat into a waterbody. However, for reasons discussed in the preamble to the proposed rule, EPA believes that the CWA requires that TMDLs rather than TMDTLs be established for these waterbodies if they are impaired solely by these sources and that they must attain water quality standards, and not just a balanced, indigenous population of shellfish, fish and wildlife.

j. New Definition of Reasonable Assurance (§ 130.2(p))

What did EPA propose? EPA proposed to define "reasonable assurance" as a demonstration that wasteload allocations and load allocations in a TMDL would be implemented. EPA proposed that each TMDL provide reasonable assurance that allocations contained in a TMDL would, in fact, be implemented to attain

and maintain water quality standards in the waterbody. EPA incorporated the term in proposed § 130.33(b)(10)(iii) dealing with TMDL implementation plans to emphasize that implementation of the allocations in TMDLs is critical to the ultimate attainment of standards in impaired waterbodies across the country.

What comments did EPA receive? EPA received a number of comments generally opposing the concept of reasonable assurance. Some commenters believe that EPA does not have the authority to require States, Territories or authorized Tribes to demonstrate reasonable assurance, and that the definition of reasonable assurance was too prescriptive. EPA also received comments generally in support of the reasonable assurance provision, noting that it is important to have assurance that implementation will occur and that water quality standards will be met.

EPA received many comments on specific aspects of the proposed definition of reasonable assurance. A major theme was that the proposed definition did not recognize that State, Territorial and authorized Tribal nonpoint source programs are largely voluntary. Furthermore, many commenters noted that States may have limited regulatory authority to address nonpoint sources, and perceived the definition of reasonable assurance as forcing States to adopt regulatory controls on nonpoint sources. Many commenters urged that voluntary, incentive-based programs should be acceptable as reasonable assurance. Conversely, a number of commenters believed that regulatory controls for nonpoint sources were necessary to provide reasonable assurance, or that, in order to provide reasonable assurance, implementation plans needed to be enforceable. A few commenters suggested that States, Territories and authorized Tribes need to have regulatory authority to control pollutants from nonpoint sources in the event that voluntary programs do not succeed.

Numerous commenters expressed concern about the funding component of reasonable assurance. A frequently-cited concern was that States would not be able to guarantee full funding to implement the TMDL at the time a TMDL was established. Some commenters also believed that the funding provision was not well-defined, and that, when reviewing TMDLs, EPA would not be able to evaluate whether the State had demonstrated "adequate funding." Others noted that States, Territories and authorized Tribes lack adequate funding and staff to establish and implement TMDLs and that EPA needs to ensure adequate funding through the section and other programs.

EPA received some comments regarding the ability of existing State and Federal authorities and programs to satisfy the reasonable assurance provision. Some commenters suggested that approval of a State, Territorial or authorized Tribal nonpoint source program or nonpoint source management plan should by itself, constitute reasonable assurance. Other commenters disagreed and said that reference to existing programs by itself is not adequate, and that control actions assuring TMDL implementation must be specific to the source and the waterbody. Some commenters urged flexibility in allowing for a variety of implementation mechanisms to satisfy reasonable assurance such as other Federal and State forest and land management programs. Several comments pointed out that it would be difficult to provide reasonable assurance, given the challenge of aligning multiple State and Federal agencies, and multiple watershed groups.

Some commenters suggested that EPA needs to better define what it means that procedures and mechanisms relating to nonpoint sources of a pollutant must be implemented expeditiously, or specify a particular timeframe for their implementation. A few commenters believed that EPA was not in a position to evaluate what constitutes expeditious, and that the term should be eliminated.

A few commenters questioned EPA's authority to provide reasonable assurance when it establishes a TMDL for nonpoint sources. Some also questioned EPA's authority to condition section 319 grant funds as a way of providing reasonable assurance. Conversely, a few commenters supported EPA's full use of its authorities to implement TMDLs, or to condition section 319 funds, as necessary.

What is EPA promulgating today? Today's rule contains a revised definition of reasonable assurance. Reasonable assurance continues to mean a demonstration that TMDLs will be implemented through regulatory or voluntary actions, by Federal, State or local governments, authorized Tribes or individuals.

Reasonable assurance is a demonstration that a TMDL's implementation plan will indeed be implemented. (See § 130.32(c).) EPA believes that it has the authority to require the demonstration of reasonable assurance as part of the implementation plan. Section 303(d) requires that a TMDL be established at a level necessary to implement water quality standards and requires EPA to review and either approve or disapprove the TMDL. CWA section 501(a) also authorizes EPA to adopt regulations as necessary to implement the Act. To approve a TMDL, EPA believes it is necessary to determine whether a TMDL is in fact established at a level necessary to attain water quality standards. For EPA to determine that the TMDL will implement water quality standards, there must be a demonstration in the TMDL of reasonable assurance that the TMDL's load and wasteload allocations will be implemented. Otherwise, the allocations presented in a TMDL lack a necessary link to anticipated attainment of water quality standards.

Reasonable Assurance for Point Sources for Which an NPDES Permit is Required

Reasonable assurance for point sources for which an NPDES permit is required means that States, Territories and authorized Tribes must identify procedures that will ensure that permits will be modified, issued or reissued as expeditiously as practicable to incorporate effluent limits consistent with the wasteload allocations. For these demonstrations of reasonable assurance, the phrase "as expeditiously as practicable" means in general that the permitting authority, either an authorized State, Territory, or Tribe, or EPA, will issue the permit as follows. For facilities receiving a permit for the first time, "as expeditiously as practicable" means that the permitting authority must issue the permit that implements the wasteload allocation before the facility begins to discharge. Under EPA's current NPDES rules, a facility may only discharge pollutants from point sources into waters of the United States as authorized by an NPDES permit (§ 122.1). New facilities must receive their permit before they can lawfully discharge pollutants. Also, current NPDES regulations require that NPDES effluent limitations be consistent with the applicable wasteload allocation in an approved TMDL (§ 122.44(d)(1)(vii)(B)). Therefore, EPA believes that its interpretation of "as expeditiously as practicable" for facilities receiving their first permit is consistent with the current practice of the NPDES permit program. For facilities currently permitted, "as expeditiously as practicable" means that the permitting authority will reissue the permit as soon as it can after the permit expires, taking into account factors such as available permitting resources, staff and budget constraints, other competing

priorities, and watershed efficiencies. Alternatively, the permitting authority, may choose to modify the permit prior to expiration in accordance with the permitting authority's modification requirements.

The phrase "as expeditiously as practicable" adds a time element to the word "expeditiously", which was used in the proposal. The dictionary definition of "expeditiously" is fast or rapidly. EPA received comments about "how fast is fast," and whether any factor governed how quickly EPA expected a permitting authority to issue or reissue NPDES permits. EPA intended that permitting authorities would not delay their normal issuance or reissuance of permits and would modify the permits when they contained a reopener provision allowing modification of the permit conditions on the basis of new information. EPA is using the phrase "as expeditiously as practicable" in the final rule to clarify further what EPA means by the word "expeditiously" used in the proposal. This clarification should allow permit authorities to schedule permit issuance and reissuance actions consistent with the relevant factors discussed above.

Reasonable Assurance for Sources for Which an NPDES Permit is Not Required

For all other sources, including nonpoint sources, storm water sources for which an NPDES permit is not required, atmospheric deposition, groundwater and background sources, reasonable assurance means that actions implementing the load allocations meet a four-part test. The control actions or management measures must be (1) specific to the pollutant and waterbody for which the TMDL is being established, (2) implemented as expeditiously as practicable, (3) accomplished through reliable delivery mechanisms, and (4) supported by adequate funding. For these sources, each TMDL must meet each one of these tests prior to EPA approval.

(1) Specific to the pollutant and waterbody. The first part of the four part test for reasonable assurance is that the management measure or control be specific to the pollutant and waterbody. By this, EPA means that the State, Territory, or authorized Tribe knows of, and can point to, information showing that the management measure relied upon to achieve the reduction in the loading can reduce that pollutant. By "specific," EPA does not intend that States, Territories or authorized Tribes collect new or additional site-specific information, but rather that they provide EPA existing data that relates to the specific waterbody and pollutant. For example, a State may rely on a program that installs buffer strips to demonstrate reasonable assurance. In this example, the State would point to National Resource Conservation Service information showing that buffer strips are effective in mitigating erosion and thus can reduce loadings of the specific pollutant, *i.e.,* sediment. Also, the State would need to show which waterbodies within the watershed would receive buffer strips and explain the characteristic of these buffer strips. In this way, the State may fulfill the requirements of this part of the four part test. For atmospheric deposition, where the controls will result from Clean Air Act regulations, reference to current or anticipated Clean Air Act regulations should explain how those regulations relate to the specific pollutant of concern.

(2) As expeditiously as practicable. EPA intended that States, Territories, and authorized Tribes would implement management measures as quickly as they reasonably could in light of other water quality needs. For the reasons discussed above, EPA is using the phrase "as expeditiously as practicable" in the final rule to clarify the word "expeditiously" as used in the proposal. EPA expects that States, Territories, and authorized Tribes will make nonpoint source controls implementing a TMDL for which there are no point sources subject to NPDES permits a high priority for nonpoint source program funding. Scheduling of nonpoint source controls is also discussed in section II.P. of this preamble. For atmospheric deposition, adoption of Clean Air Act regulations and implementation of those regulations pursuant to the provisions of the Clean Air Act would satisfy the reasonable assurance requirement that implementation will occur as expeditiously as practicable.

(3) Reliable delivery mechanisms. EPA did not include the concept of "reliable delivery mechanism" in the proposed definition of reasonable assurance. EPA did discuss this concept in the preamble discussion of the definition. (64 FR 46033, August 23, 1999). Reliable delivery mechanism means the programmatic and administrative means by which the management measures and control actions will be implemented and monitored. Several comments expressed concern that the preamble discussion was not reflected in the rule language, and suggested that this preamble phrase should be included in the definition. EPA was persuaded by the comments that it should do this.

EPA is also adding the word "effective" to modify "reliable delivery mechanism." EPA believes that this concept is a logical outgrowth of the preamble to the proposed rule. There, EPA discussed that voluntary and incentive-based programs may be used to demonstrate reasonable assurance. It goes without saying that these programs must be "effective" in order to provide reasonable assurance. Nevertheless, to avoid confusion, EPA decided to be clear and add the word "effective" to the final rule.

Some existing nonpoint source related programs may also be reliable and effective delivery mechanisms specific to the waterbody and pollutant for purposes of providing reasonable assurance. Programs, procedures or authorities including State, Territorial or authorized Tribal programs approved under section 319 of the CWA or existing conservation or water quality protection programs administered by the United States Department of Agriculture which have demonstrated success in delivering water quality improvements in the past may be reliable delivery mechanisms for the purpose of § 130.2(p). State, Territories and authorized Tribes will need to explain how these programs will be implemented in the specific impaired waterbody and how they address the pollutant causing the impairment. For atmospheric deposition, implementation of the Clean Air Act regulatory program could provide the necessary reliable delivery mechanism.

(4) Adequate funding. Finally, today's rule clarifies what EPA considers to be "adequate funding" for the purpose of demonstrating reasonable assurance. In response to comments, EPA is including in the final rule the funding language from the proposed rule preamble, and providing a more detailed discussion of this term below. (64 FR 46033 to 46034, August 23, 1999). EPA believes that adequate funding means that existing water quality funds have been allocated to implement load allocations to the fullest extent practicable and in a manner consistent with the effective operation of the clean water program in the State, Territory, or authorized Tribe. EPA believes that implementing TMDLs is a central part of water quality management. At the same time EPA recognizes that effective water quality programs are comprised of many different activities which must be carried out concurrently. It would make no sense to fund only TMDL activities and eliminate other important activities. For atmospheric deposition, where controls will be required by Clean Air Act regulations, the process for adoption

and implementation of those regulations should satisfy the requirement for adequate funding.

Today's rule requires that States, Territories and authorized Tribes identify adequate clean water program funding to implement load allocations. Clean water program funding includes Federal funding through the CWA and some related Federal, State, Territorial or authorized Tribal funding. In the event that funding is not currently adequate to implement the TMDL, EPA may approve the TMDL if the State, Territory, or authorized Tribe provides an explanation of when adequate funds will be available and a schedule by which these funds will be obtained and used to implement the TMDL. EPA believes that such a schedule identifying when load allocations will be implemented as funding becomes available is necessary to provide reasonable assurance that load allocations will be achieved where adequate funding is not currently available. As indicated in implementation plans provisions, such a schedule must assure that implementation will be as expeditious as practicable (*i.e.,* within 5 years when practicable) for waterbodies impaired only by sources which are not subject to NPDES permits, including nonpoint sources.

Use of Existing Programs

EPA believes that existing nonpoint source programs can provide the suite of control actions and management measures for States to rely on when meeting the reasonable assurance test. Examples of voluntary and incentive-based actions or existing programs include State, Territorial or authorized Tribal programs to audit implementation of agricultural management measures and memoranda of understanding between State, Territorial and authorized Tribal governments and organizations that represent categories, subcategories or individual sources which assure implementation and effectiveness of management measures.

A State, Territory, or authorized Tribe may need to consider other programs to address pollutants introduced in a waterbody by atmospheric deposition or groundwater. For example, the State, Territory, or authorized Tribe could rely on scheduled reductions in atmospheric sources under the Clean Air Act or similar State authority. Likewise, it could rely on reduced groundwater loadings as a result of remedial actions under the Resource Conservation and Recovery Act (RCRA) or similar State authority. If these programs cannot provide reasonable assurance that the pollutant loads will be reduced, the load reduction will have to be assigned to other sources.

Generally, a State, Territory, or authorized Tribe will demonstrate reasonable assurance for the part of the load allocation that addresses the loading of pollutants contributed by background sources by quantifying the loading so that it can be included in the calculation of the total loading in a waterbody. In these situations, this background loading would be presumed to be constant and load reductions will be assigned to other sources. However, if a State, Territory, or authorized Tribe expects that the background loadings will decrease as a result of some action and is relying on this decrease in the calculation of wasteload and load allocations, then the State, Territory, or authorized Tribe will need to apply the four-part test to demonstrate the reasonable assurance for this expected reduction.

The test of reasonable assurance in today's rule is not met simply by having programs, authorities or voluntary measures described in the definition of reasonable assurance in place. In order for such programs, authorities or measures to provide reasonable assurance each one of the four parts of the test must be satisfied. For example, if a State offers a particular voluntary program approved under section 319 as proof of reasonable assurance, EPA will review the program information to see whether it specifically addresses the waterbody/pollutant of concern, includes actions that will be implemented as expeditiously as practicable, will be accomplished through a reliable delivery mechanism with a good track record of success and meet the adequate funding test.

Reasonable Assurance When EPA Establishes TMDLs

In some cases, EPA will have to disapprove a State's TMDL and establish the TMDL. When establishing a TMDL, EPA will also have to provide reasonable assurance as required by §§ 130.32(c) and 130.2(p). In providing reasonable assurance, EPA may rely on various statutory or regulatory authorities to meet the four-part test which applies to load allocations for sources not subject to an NPDES permit. EPA cannot, of course, require States, Territories or authorized Tribes to use their own statutory or regulatory authorities to provide reasonable assurance for EPA. EPA may, however, condition some or all CWA grants to the fullest extent practicable and in a manner consistent with the effective operation of other CWA programs in order to meet the adequate funding part of the four-part reasonable assurance test. Such action would by itself serve to satisfy that part of the reasonable assurance test when EPA establishes a TMDL. For example, EPA may condition section 319 grants such that States can only use some or all of these funds to implement management measures in watersheds where EPA has established a TMDL that includes load reductions for nonpoint sources. Similarly, EPA may condition section 106 grants to States such that some of the funds for monitoring can only be used to support the monitoring specified in TMDL implementation plans. EPA may also use its voluntary, incentive-based programs, such as section 104(b)(3) demonstration grants for watershed restoration, to ensure that management measures are funded and implemented. EPA may provide reasonable assurance for wasteload allocations by issuing NPDES permits within the time frames prescribed by § 130.32(c)(1)(ii) where EPA is the permitting authority, or by objecting to expired State-issued permits so that new permits will be issued to implement wasteload allocations from approved TMDLs.

By requiring such a demonstration of reasonable assurance before it may approve or establish a TMDL, EPA does not intend to create a mandatory duty or legal obligation that either the State, Territory, authorized Tribe or EPA implement those actions identified as providing reasonable assurance. The reasonable assurance demonstration is a "snapshot-in-time" identification of those voluntary and regulatory actions that the State, Territory, authorized Tribe or EPA intends to take to ensure that the nonpoint source load allocations assigned in the TMDL will be realized. If such demonstration is deemed satisfactory at the time the TMDL is being reviewed or developed by EPA, the TMDL may be approved or established. If in the future, the State, Territory, authorized Tribe or EPA determines that the TMDL is not being implemented, or that the implementation plan needs to be revised, the State, Territory, authorized Tribe or EPA may take action, as appropriate under existing State, Territorial, Tribal or Federal legal authority, to effect implementation or revise the TMDL. Nothing in this rule, however, creates in EPA or the States new legal authority beyond that provided by existing State, Territorial, Tribal or Federal law to implement load allocations for nonpoint sources or

creates for EPA, States, Territories or authorized Tribes a mandatory duty to do so.

k. New Definition of Waterbody (§ 130.2(q))

What did EPA propose? EPA proposed a definition of the new term "waterbody" to codify EPA's interpretation of the term for the purposes of TMDLs. The proposed definition would have provided States, Territories, and authorized Tribes more flexibility than the current regulation which refers to segments and would have allowed States, Territories, and authorized Tribes to tailor the geographical size of the watershed for which the TMDL was being established to match the pollutants and nature of impairment.

What comments did EPA receive? EPA received a number of comments on this definition. Most commenters suggested that the definition exclude ephemeral streams and wetlands. These commenters expressed concern over the application of water quality standards to these waterbodies, and thus suggested that TMDLs should not be established for them. Other comments expressed concern that the definition would prevent establishment of a TMDL for one segment of a river.

What is EPA promulgating today? After review of comments, EPA is promulgating the proposed definition with two minor changes. First, EPA is revising the proposed language to recognize that waterbodies can be made up of one or more segments of rivers, streams, lakes, wetlands, coastal waters or ocean waters. EPA did not intend to require that a TMDL consider the full geographic extent of a waterbody. Rather EPA intended to give States, Territories and authorized Tribes the flexibility to establish TMDLs for one or more segments. Second, EPA is adding a recommendation to the rule that the use of segments should be consistent with the use of segments in a State's water quality standards. EPA is making this recommendation to help promote consistency between how TMDLs are developed and how water quality standards are expressed.

EPA does not believe that the nature of a waterbody, such as an ephemeral stream or a wetland, and the challenge that nature may pose to establishing a TMDL, should preclude it from being defined as a waterbody. EPA believes that this is a water quality standard issue and that the appropriate forum for resolving questions about water quality standards is in the development of the standards themselves, and not in the application of the standards in a TMDL context.

1. New Definition of List (§ 130.2(v))

What did EPA propose? EPA proposed to include a new definition to refer to the four elements of the list and the prioritized schedule. EPA proposed this revision to expedite reference to the four elements and schedule within the rule.

What comments did EPA receive? EPA received no substantial comments unique to this definition. Some commenters did offer suggestions on what are acceptable elements of a list; these comments are addressed in parts of today's preamble that address these elements.

What is EPA promulgating today? EPA is revising the proposed definition of "list of impaired waterbodies" to make it consistent with other provisions of the final rule. First, EPA is clarifying that the list consists of all four parts of the required submission. This is to ensure that there is no confusion over whether certain parts of the list that may be submitted along with the State's section 305(b) report are in fact part of the section 303(d) list. In addition, the definition states that Part 1 of the list includes both waterbodies identified for TMDL development and the prioritized schedule for those waterbodies. This revision makes the definition consistent with the requirement to submit the prioritized schedule as part of the list itself, subject to EPA approval or disapproval, rather than as a separate document with the list submission that EPA will review but not take action on.

2. Response to Requests for New Definitions

What did EPA propose? EPA's proposal of August 23, 1999, requested comments on all aspects of adding new definitions.

What comments did EPA receive? EPA received comments suggesting that EPA add several definitions for terms used in the proposed rule or discussed in comments which requested additions to the requirements of the final rule.

What is EPA promulgating today? EPA has decided not to add other definitions to § 130.2. EPA is not adding a definition of "balanced indigenous population of fish, shellfish, and wildlife." There is an existing regulatory definition of the term "balanced indigenous population" in § 125.70 that, although it explicitly applies only to the regulations implementing section 316(a), provides the Agency's interpretation of this term for purposes of identifying impaired waterbodies and establishing TMDLs pursuant to section 303(d).

EPA is not adding a definition of "watershed." The term is not used within the final rule to trigger a regulatory provision, and thus does not require definition. EPA prefers to allow States, Territories, and authorized Tribes the flexibility to define a watershed within the context of their own programs. However, EPA encourages the use of the hydrologic unit codes for watersheds defined by the U.S. Geologic Survey since they are a uniform system of watershed identification that will clearly identify to other States, Territories, Tribes, EPA and the public the boundaries of watersheds defined by the States in the context of their water quality programs.

EPA is not including a specific definition in the final rule for " trading" and thus declines to add trading-related definitions for "real," "quantifiable" or "surplus" as suggested by some comments as being necessary if EPA included regulatory provisions for trading.

EPA is not adding a definition of "existing and readily available," "man-made or man-induced," "point source," "nonpoint source," and "waters of the contiguous zone." This final rule at § 130.22(b) already provides a definition of existing and readily available water-quality related data and information by enumerating particular categories of water-quality related data and information that must be considered. The regulations clearly state that this list is not exhaustive, but rather is intended to identify specific kinds of water quality-related data and information that will be considered existing and readily available, in addition to water-quality related data and information in other relevant categories that are not explicitly listed in the regulations. EPA does not believe it can accurately identify each and every type of water-quality related data and information that should be considered in every state's listing process, in light of the broad variety of relevant water-quality related data and information that is and will be available. Therefore, it is appropriate to list specific categories that are likely to exist for every state, and leave it to the States, Territories, and authorized Tribes to collect and evaluate other relevant information.

The CWA itself uses the term "man-made or man-induced" within the statutory definition of pollution; EPA believes this term is very clear and needs no further clarification. The CWA already defines "point source" and EPA does not believe that today's rule needs to reiterate this definition. EPA

interprets "nonpoint source" to apply to all sources that do not meet the statutory definition of a point source. Finally, the CWA at section 502(a) already defines the term "contiguous zone" and EPA does not believe that it needs to reiterate this definition in today's final rule.

EPA disagrees that it should add a definition of "sensitive aquatic species." This term was used in the proposal merely to indicate a factor that States, Territories and authorized Tribes should consider when establishing priorities for TMDLs. Since this is a discretionary practice in the final rule, EPA believes that it need not define the term.

EPA also disagrees that it should add a definition of "seasonal variations." This term originates in CWA section 303(d)(1)(C). EPA believes it means seasonal variation in environmental conditions which affect a waterbody's character, *e.g.*, variations in a waterbody's temperature, flow rate, or dissolved oxygen level. EPA does not believe the term needs a separate regulatory definition. Further, § 130.32(b)(9) provides sufficient explanation of what is to be included in the assessment of seasonal variation.

EPA disagrees that it should add a definition of "comprehensive watershed management plan." This term is not used in the final rule, and thus does not require definition.

EPA disagrees that it should add a definition of "natural sources/causes" or "ephemeral stream." EPA believes these terms are best defined in State, Territorial and authorized Tribe's water quality standards. The term "natural sources/causes" was suggested to clarify how a TMDL would address impairments caused by natural sources or causes. EPA believes this question is best addressed when a State, Territory, or authorized Tribe decides the appropriate water quality criteria for that waterbody. The term "ephemeral stream" was suggested to identify a type of waterbody for which special water quality standards would be necessary. Again, EPA believes this question is best addressed when a State, Territory, or authorized Tribe decides the appropriate water quality criteria for that waterbody.

B. Who Must Comply With the Requirements of Subpart C? (§ 130.20)

What did EPA propose? EPA's proposal included a list of entities which would be subject to the subpart C regulations. The proposal defined the term "you" to pertain to States, Territories, and authorized Tribes. The proposal also stated that portions of subpart C apply to EPA.

What comments did EPA receive? EPA received only a few of comments on this section. These comments expressed concern that EPA was only subject to unspecified portions of subpart C, and recommended that EPA should be subject to the same requirements as are States, Territories, and authorized Tribes.

What is EPA promulgating today? EPA declines to further clarify this section. Its purpose is to explain that the term "you" as used in a rule written in plain English applies to States, Territories and authorized Tribes. As to the parts of the rule that apply to EPA, EPA considers that §§ 130.22, 130.23, 130.25, 130.26, 130.27, 130.28, 130.29,130.31, 130.32, 130.33, 130.36, and 130.37 apply to EPA when EPA establishes lists or TMDLs. These are the same substantive requirements that apply to States, Territories, and authorized Tribes.

Other sections of subpart C pertain to EPA's review and approval or disapproval of lists and TMDLs. These sections are specifically identified in the titles for the sections.

C. What is the Purpose of Subpart C? (§ 130.21)

EPA proposed to include this section in the regulations to give the reader an overall summary of the requirements included in §§ 130.22 through 130.37 of Subpart C. EPA received many comments regarding the purpose of its proposal. These comments are all addressed in other parts of this preamble or in the Response to Comments Document. For the sake of clarity, this section has been slightly expanded in today's rule to reflect decisions made on the various requirements which are explained in detail following sections of the preamble. In addition, the section clearly lays out the actions which EPA will undertake in the absence of approvable actions by a State, Territory, or authorized Tribe. Finally, this section is reorganized to group together requirements for States, Territories, and authorized Tribes, and those for EPA.

D. What Water-Quality Related Data and Information Must be Assembled To Develop the List of Impaired Waterbodies? (§ 130.22)

What did EPA propose? In § 130.22 of the proposal, EPA included a listing of the sources of water-quality related data and information which a State should consider in order to develop its list of impaired waterbodies. Generally, EPA proposed to retain the requirements of current § 130.7(b)(5) with one significant addition. EPA proposed at § 130.22(b)(4) that States, Territories and authorized Tribes should consider the information included in the Drinking Water Source assessments mandated by the Safe Drinking Water Act. EPA intended that the data obtained from these sources would then be analyzed using the State's methodology developed under proposed § 130.23.

What comments did EPA receive? EPA received a significant number of comments concerning both this section and proposed § 130.23. Some commenters specifically addressed the list of data sources proposed in § 130.22. Their comments are addressed in this section. EPA also received many comments dealing with the issues of data quality, types of data which should be considered as existing and readily available, and the use of monitored vs. modeled or evaluated data. Some commenters raised these issues in the context of § 130.22, others in the context of § 130.23 For the sake of clarity EPA is addressing these issues in the discussion of § 130.23.

As far as the list of sources, a significant number of commenters took exception to inclusion of the source water assessments while others supported it. Some commenters suggested that source water assessments were not appropriate sources of data because they are likely to be desk-top short-term qualitative documents containing no actual data, and suggested that sanitary surveys would be better sources of data. Others believed that EPA should clarify that ground water assessments should not be used for listing decisions. Other commenters suggested either additions or deletions from the list.

What is EPA promulgating today? After careful consideration of these comments, EPA is promulgating this section as proposed. The Agency appreciates that there are other sources of data available and does not intend the list to be exclusive. States must consider other types of water quality-related data and information that are existing and readily available. On the other hand, EPA does not expect the States, Territories and authorized Tribes to use data contained in the listed documents, including source water or groundwater assessments, in an indiscriminate fashion. The expressed purpose of § 130.23 is to document the decision process the States, Territories and authorized Tribes will use to consider how data from these and any other existing and readily available sources will be used in making listing decisions. Thus, States, Territories, and authorized Tribes must consider all existing and readily available water quality-related

data and information in the listing process, but may decide not to use certain such data or information as a basis for listing waters. These decisions will be explained in the state's methodology, discussed below, so that the public and EPA will have an opportunity to provide input on the decision process.

E. How Must the Methodology for Considering and Evaluating Existing and Available Water-Quality Related Data and Information to Develop the List be Documented? (§ 130.23)

What did EPA propose? Under the current regulations, States, Territories and authorized Tribes must submit to EPA documentation justifying their decisions to list or not list waterbodies at the same time they submit the list. EPA proposed to decouple the two requirements to provide for early input from stakeholders and EPA on this decision-making process. EPA's rationale was that resolving methodology issues early in the process would lead to better, more readily approvable lists. EPA proposed to require that States, Territories, and authorized Tribes develop a methodology covering all aspects of how existing and readily available data and information would be used to identify waterbodies as impaired, assign priorities and develop a schedule for establishing TMDLs.

What comments did EPA receive? EPA received a significant number of comments concerning the use of all existing and readily available data as a basis for listing and delisting impaired waters. Many commenters strongly advocated the use of data from all sources, with or without QA/QC documentation. These commenters were concerned that setting data quality requirements too high would result in a less than comprehensive assessment of all waters, and therefore dramatically limit or underestimate the identification and listing of impaired waters. They pointed out that listing and TMDL establishment is an iterative process, and that if necessary, States, Territories and authorized Tribes could collect supplemental data to confirm or make adjustments to their initial listing decisions. Numerous commenters suggested that data should not be used for the basis of listing and delisting unless it met rigorous QA/QC requirements, and was collected and processed with documented and scientifically valid protocols. Several commenters supported the establishment of prescribed QA/QC data quality guidelines in order to assure that all data met a minimum level of technical credibility.

Numerous commenters suggested that EPA specify in detail the contents of an adequate assessment methodology. In this approach, EPA would establish requirements for sampling design, data collection, and data analysis and interpretation. Other commenters objected to such a "one size fits all" approach, and believed that the format and contents of the methodology should be left to States, Territories and authorized Tribes.

Several commenters expressed concerns over the proposed requirement that there be a separate public participation process in the development of the methodology, while others asked for more specific public participation requirements which would mandate involvement of certain stakeholders. Several commenters also suggested that the methodology be adopted through rulemaking. Some commenters asked that the final methodology be made available to the public.

A number of commenters expressed concern over the adequacy of current monitoring programs to characterize and evaluate their waters in a comprehensive manner, regardless of how restrictive the States, Territories and authorized Tribes are in the use of existing and readily available data and information. They pointed out that State, Territorial and authorized Tribal monitoring programs needed to expand their spatial and temporal coverage, monitor for additional parameters, and rapidly incorporate biological and habitat quality indicators.

Finally, some commenters suggested that the methodology needed to consider how to resolve disagreements involving waterbodies that crossed Territorial and all Tribal boundaries.

What is EPA promulgating today? EPA is making several changes to the proposed language to conform with decisions explained elsewhere in this preamble. These changes reflect the decision that the section 303(d) list include four Parts, and for Part 1, the prioritized schedule for establishing TMDLs. Also, in recognition of the fact that EPA will be reviewing and commenting on, but not approving or disapproving, the methodology, EPA has revised the regulatory text to say that States, Territories, and authorized Tribes "should", rather than must, include certain elements in the methodology.

EPA is retaining the proposed requirement that there be a separate public participation process in the development of the methodology. EPA recognizes the cost savings of combining the public participation of the methodology with that of the list. However, EPA believes there is a significant benefit to the public to have reviewed the methodology before the public reviews the list of impaired waters. EPA is also adding language to encourage States, Territories and authorized Tribes to provide direct notification of the availability of the draft methodology to persons who submit a written request. This change conforms with changes made to § 130.36 and makes all public notice requirements contained in the final rule consistent. EPA believes it is reasonable to expect States to provide direct notification to such parties, and that it will not be burdensome. Public participation is essential to ensuring accurate, comprehensive lists, and providing persons with sufficient interest in the process to request notification in writing is a fairly simple way to further ensure that all interested parties receive notice of the availability of the draft methodology. EPA notes that States need not respond to such requests by providing copies of the methodology itself, but rather may simply notify the requesting parties that the methodology is available for public review and comment. EPA also agrees with the comment that the public should have access to the final methodology and is adding language to this effect. Today's final rule does not specify how States, Territories, and authorized Tribes are to make the methodology available. EPA expects that they will use their existing practices for doing so. EPA is requiring that the final methodology be made available to the public.

EPA also agrees with the commenter's concerns regarding State, Territorial and authorized Tribal monitoring protocols. The final regulations specify that the methodology should describe procedures that States, Territories and authorized Tribes will use to collect ambient water quality information. EPA believes this is reasonable and appropriate to provide as part of the methodology since this information will likely be critical in listing waterbodies as well as determining whether waterbodies are meeting standards and may be removed from the list. It is important for the public to be informed of the data collection methods the State, Territory, or authorized Tribe intends to use, and to have an opportunity to comment on such methods. EPA believes this process will serve to minimize concerns that would otherwise be raised later, when the State, Territory, or authorized Tribe lists

or removes waters based on data it has collected through its ambient water quality data collection programs.

EPA supports the collection and use of high quality data in decision making. EPA's grant regulations require that when grantee projects, such as State and Territorial water quality work using CWA section 106 funds, involve environmentally-related measurement or data generation, the grantee shall implement quality assurance practices that produce data of quality adequate to meet the project objectives. 40 CFR 31.45. Because regulations already require quality assurance practices, EPA declines to duplicate these requirements in today's rule. EPA has published guidance which governs EPA's own data collection activities and references quality assurance/quality control guidances for others. See "Policy and Program Requirements to Implement the Mandatory Quality Assurance Program", EPA Order 5360.1, April 3, 1984, as revised July 16, 1998.

Similarly, EPA recognizes the concern that quality assurance practices could be set at so high a level as to preclude consideration of most environmental water-quality related data. For this reason, EPA is committing in the final rule to comment about a State's, Territory's or authorized Tribe's assessment methodology. This will allow EPA to express concerns about the assessment methodology, including whether the State, Territory, or authorized Tribe inappropriately included or excluded water-quality related data. In addition, EPA will consider this when EPA reviews the list of impaired waters.

The final rule at § 130.23(e)(2) now provides that the State, Territory, or authorized Tribe should develop a process for resolving disagreements with other jurisdictions involving waterbodies crossed by Territorial and Tribal boundaries, in addition to the State and authorized Tribal boundaries discussed in the proposal. EPA is adding Territories to this provision because, under section 303(d), Territories are considered in the same way as States. EPA is adding Tribes that are not authorized to administer section 303(d) to this provision because, in part, Tribes without section 303(d) authorization may have authorization under section 303(d) for water quality standards, and a resolution of disputes over how to interpret and use water quality standards becomes relevant.

EPA also declines to specify in the final rule the detailed contents of an adequate assessment methodology. EPA believes that States, Territories, and authorized Tribes need the flexibility to tailor their assessment methodology to their monitoring programs and the waterbodies within their jurisdiction and that methods change over time. To assist States, Territories and authorized Tribes, EPA is, however, developing guidance on this subject which will include key elements of monitoring programs, monitoring design for achieving comprehensive coverage of assessments, and decision criteria for determining impairments. This guidance will be available to the States, Territories, and authorized Tribes in 2000, unless delayed by the TMDL rider.

EPA recognizes the concerns expressed by commenters over the adequacy of current monitoring programs to characterize and evaluate their waters in a comprehensive manner. EPA continues to work with States, Territories, and other stakeholders to increase the quality and comprehensiveness of water quality monitoring and assessment programs. This is achieved through data sharing and development of consistent monitoring designs and assessment criteria. EPA provides technical assistance, guidance and resources for monitoring design and implementation. EPA and its partners in States, Territories, Tribes and other Federal agencies are developing a consolidated assessment methodology that will provide a consistent approach for characterizing water quality.

F. When Must the Methodology be Provided to EPA? (§ 130.24)

What did EPA propose? EPA envisioned the methodology as an evolving document which States, Territories and authorized Tribes would revise as appropriate at some time during the listing cycle. EPA proposed that States, Territories and authorized Tribes would submit their first final methodology to EPA no later than January 31, 2000, and no later than January 31 of every year preceding the year when a list would be due, but noted in the preamble that the first date was subject to change based on the date when these regulations would be promulgated. EPA also proposed that it would review the listing methodology and provide comments to the State, Territory, or authorized Tribe. EPA proposed to consider the methodology in its approval or disapproval of the section 303(d) list and explained in the preamble to the proposal that it was considering using the way in which EPA's comments on the draft methodology were addressed as a factor in approving or disapproving the list.

What comments did EPA receive? Commenters expressed differing opinions on how frequently the methodology should be submitted. Some advocated a one time submission, with updates as needed. Others suggested that the methodology be submitted with each list. There was a diverse set of comments concerning the role of EPA in formally approving the methodology. Some commenters strongly endorsed a formal approval/disapproval of the methodology as part of EPA's action on the submitted list. Some commenters believed that EPA had no role in reviewing or approving the methodology. They believed that it was strictly a State, Territorial and authorized Tribal responsibility to establish and implement data collection and assessment protocols. Numerous commenters strongly advocated that EPA only provide advice, comment and technical guidance to States, Territories and authorized Tribes.

What is EPA promulgating today? EPA continues to believe that the methodology will be an evolving document; therefore, the final rule requires that it be provided to EPA during every listing cycle. However, EPA recognizes that not all aspects of the methodology may change during any given cycle, and the final rule provides that only revised portions of the methodology need be provided. EPA will already have the previous list's methodology, and will have provided comments on the unchanged portions during prior list cycles. Therefore, EPA's comments will likely focus on any changed portions of the methodology. However, the State, Territory, or authorized Tribe must make available to the public for comment the entire methodology, including portions unchanged from prior listing cycles. EPA expects the State, Territory, or authorized Tribe to address in its final methodology comments from the public on all aspects of the methodology, including those that were not changed.

As was proposed, the final rule requires that the methodology and updates to the methodology be provided to EPA at least once per four-year listing cycle. EPA's rationale for choosing a four year list submittal cycle is explained later in this preamble. Except for the first listing cycle pursuant to these regulations, States, Territories and authorized Tribes must provide the methodology no later than two years prior to the due date of the list. This time provides sufficient time for States, Territories and authorized Tribes to collect water-quality related data for the next section 303(d) list consistent with

their most recent assessment methodology. This schedule is compressed for the first list because EPA agrees with the commenters who expressed an urgency in seeing these regulations implemented. The methodology for the first list required to be submitted under today's regulations is due no later than November 1, 2001, five months before the list is due, unless the rider is in effect through that date. EPA believes this date strikes a balance between the competing concerns of allowing States, Territories and authorized Tribes sufficient time to develop a methodology (including providing an opportunity for the public to comment) consistent with today's regulations, and having state lists submitted under today's regulations without undue delay. States, Territories and authorized Tribes will have nine months to develop the methodology and submit it to EPA. EPA will review the methodology and provide comments within 60 days (by July 1, 2001). Thus, the State, Territory, or authorized Tribe will have nine months from the time it receives EPA's comments on its methodology to develop and submit its section 303(d) list.

EPA will not formally approve or disapprove the methodology but provide comments to help the State, Territory, or authorized Tribe develop appropriate methodologies for listing decisions so that the ultimate goal of § 130.23—approvable lists—is achieved. Thus, EPA's review of and comments on State, Territory, or authorized Tribe methodologies will focus on whether the methodology will result in an adequate review of all existing and readily available water quality-related information, whether the factors that will be used to make listing and removal decisions are reasonable, whether the process for evaluating different kinds of water-quality related data and information is sufficient, whether the process for resolving jurisdictional disagreements is sufficient, whether the process for developing a prioritized schedule is reasonable and consistent with the requirements of the CWA and EPA's regulations, and whether the State, Territory, or authorized Tribe has adequately responded to comments from the public on its draft methodology.

In its review of the State's, Territory's or authorized Tribe's list submission, EPA will consider whether the State, Territory, or authorized Tribe adequately addressed EPA's comments on its final methodology. In some cases, the failure to address such comments may result in a disapproval or partial disapproval of the state's list submission. For example, if EPA concludes that the state's methodology fails to adequately consider certain kinds of relevant water-quality related data and information, but this deficiency is not corrected in the final list submission, EPA may disapprove the list if it determines that this deficiency resulted in the state's failure to include certain waterbodies required to be listed. Therefore, EPA is in the final regulation committing to provide comments to States, Territories and authorized Tribes within 60 days of receiving the methodology. This should give States, Territories and authorized Tribes sufficient time to make necessary adjustments in their methodology to submit an approvable list to EPA.

EPA is also revising the proposed language to require in the final rule that States, Territories and authorized Tribes provide to EPA a summary of public comments they received on their final methodology and of their response to significant comments. EPA believes that it can better provide informed comments on State, Territory, and authorized Tribe methodologies if it knows what comments they received. Also, EPA believes it needs this information to assist in its review and approval or disapproval of the lists of impaired waterbodies in order to understand issues raised by members of the public and how they were addressed in the listing process.

In the event that the effective date of today's rule is later than May 1, 2001, States, Territories, and authorized Tribes are not required to develop the methodology for the year 2002 list under the requirements of this regulation. Instead, States, Territories, and authorized Tribes will need to provide a methodology under the previous regulation. See Section V.5 of the preamble.

G. What is the Scope of the List of Impaired Waterbodies? (§ 130.25)

What did EPA propose? EPA proposed to eliminate the term "water quality-limited segments still requiring TMDLs" from the regulations and to broaden the scope of the list. EPA proposed requiring States, Territories and authorized Tribes to list all impaired or threatened waterbodies, regardless of whether the waterbody was expected to attain water quality standards following the application of technology-based controls required by section 301 and 306 of the CWA, more stringent effluent limitations, or other required pollution controls.

EPA proposed that States, Territories and authorized Tribes would list all waterbodies impaired or threatened by pollutants, by pollution, by atmospheric deposition, and by unknown pollutants. EPA proposed that these waterbodies be listed regardless of the source of the impairment: point source, nonpoint source or a combination of both. EPA's rationale for this proposed section was to provide a list that served as a comprehensive public accounting of impaired and threatened waterbodies and provided all stakeholders with an ongoing record of success in attaining water quality standards as TMDLs were completed and implemented.

What comments did EPA receive? EPA received a significant number of comments suggesting that threatened waterbodies not be included on the section 303(d) lists. These commenters stated that the section 303(d) list was expressly for waterbodies not meeting water quality standards—not waterbodies currently meeting water quality standards even if they exhibited a declining trend in water quality. Several commenters supported the inclusion of threatened waters on the section 303(d) list. They asserted that protective pollution control efforts would prevent further deterioration of these waters, and prevent them from becoming "formally" impaired. Many commenters suggested that threatened waters not be listed, but be tracked and reported elsewhere. Some commenters expressed concern that EPA had not yet provided sufficient guidance on how to define a declining trend, and that radically different approaches would be employed by the States. In general the States were very concerned with the workload that requirement might entail, in light of what they believed to be a more expansive definition of a TMDL.

A significant number of commenters suggested that only waters impaired by an identified pollutant should be required to be listed, and that waters impaired by pollution, where no pollutant could be identified, should not be listed. It was their view that the section 303(d) list was intended to identify waterbodies for which TMDLs for a pollutant or pollutants were to be established. Numerous commenters supported the required listing of waterbodies impaired by pollution. It was their position that the inclusion of pollution impairments was a more comprehensive reporting of the status of the nation's waterbodies, and allowed States, Territories and authorized Tribes to target pollution control actions more effectively.

Several commenters objected to the use of drinking water standards as a basis for listing impaired waterbodies because they believed that MCLs are developed for protecting drinking water

at the tap and are wholly inappropriate for use as a standard to define ambient water quality impairments.

EPA received numerous comments suggesting that the requirement to list waterbodies impaired or threatened by an unknown pollutant be eliminated. Some commenters believe that this language was so wide-open as to lead members of the public to request that waterbodies be listed in the absence of any information even indicating an impairment. Many commenters were concerned that listing for an impairment without identifying a pollutant could have significant adverse regulatory implications. Several commenters were concerned that in many cases of biological impairment, the pollutant could never be identified. Other commenters supported listing waterbodies where the pollutant was unidentified. They endorsed the strategy to first list the waterbody, and then attempt to identify the pollutant as a first step in establishing the TMDL.

Several commenters strongly challenged EPA's authority to require the listing of waterbodies impaired by nonpoint source pollution. It was their interpretation of section 303(d) that the text "waterbodies for which effluent limitations required by section 301(b)(1)(A) and (B), and are not stringent enough to implement any water quality standard," applies expressly only to point sources, and, therefore, exempts waters impaired by nonpoint sources alone. Many commenters were concerned that the inclusion of nonpoint source only waters would greatly expand the number of waters listed, and because of excessive resource demands, reduce the effectiveness of dealing with point source impairments. Other commenters supported the requirement to list waters impaired only by nonpoint sources. In general, these commenters suggested that waters be listed regardless of the cause of the impairment—point source, nonpoint source or both.

A significant number of commenters suggested that EPA should not require the listing of waterbodies threatened by atmospheric deposition. Several of these commenters challenged EPA's statutory authority under the CWA to require that waters impaired by atmospheric deposition be listed. A number of these commenters suggested that the Clean Air Act was a more appropriate vehicle for addressing the effects and controls of air sources of pollutants. Many commenters stated that it was technically infeasible to link and estimate the significance of the atmospheric contribution of a pollutant, and that adequate technical tools to establish TMDLs for pollutants contributed by air deposition did not yet exist. Several commenters supported the listing of waterbodies impaired or threatened by atmospheric sources of pollutants. These commenters stated that the source of the impairment was irrelevant as to whether a waterbody should or should not be listed.

What is EPA promulgating today? EPA is making two significant changes to the proposed language. First, EPA is not requiring that States Territories or authorized Tribes, include threatened waters. However, EPA is encouraging States, Territories and authorized Tribes to include on the list those waterbodies which they anticipate will become impaired before the next listing cycle.

Waterbodies which exhibit a declining trend in water quality at the time a list is being developed such that water quality standards will likely be exceeded by the time of the next list submission are not required to be listed under the final rule. However, EPA expects that such waters will either exceed standards at the next listing cycle if the declining trend continues as expected and must then be listed or will attain standards by that time if the declining trend is reversed. Thus, a State, Territory, or authorized Tribe still has an incentive to adopt controls that address threatened waterbodies so that listing and TMDL development can ultimately be avoided. Moreover, if declining trends are not reversed, it is likely that the waterbody will be required to be included in the next list and scheduled for TMDL development if included on Part 1. For this reason, TMDL development will not be delayed more than four years compared to the proposed approach for requiring listing of threatened waters.

Alternatively, a State, Territory, or authorized Tribe could decide to list a threatened waterbody on the section 303(d) list, schedule a TMDL if the impairment was caused by a pollutant, and proceed with establishing the TMDL. If a State, Territory, or authorized Tribe chooses to do so, this TMDL will be subject to the requirements of subpart C, that is, the TMDL must be submitted to EPA for review, and EPA's approval or disapproval and establishment of a TMDL will be based on the requirements of subpart C. In addition, as required by § 130.35(a), EPA must establish a TMDL for any waterbody that a State, Territory, or authorized Tribe lists and does not make substantial progress in establishing the TMDL as compared to its approved schedule. The decision to include threatened waters or not is left entirely to the discretion of States, Territories, and authorized Tribes. EPA will not use grant conditions or other mechanisms to influence this decision.

Second, EPA is clarifying that in order for a waterbody to be listed in the absence of information regarding the presence of a pollutant, there has to be some biological information, (*e.g.* not supporting a designated or existing habitat use) supporting the impairment finding.

EPA is declining to make any of the changes suggested by the commenters pertaining to the scope of the list of impaired waterbodies as described by § 130.25. Most of the comments suggesting that the scope of the list should be narrowed based their rationale on their interpretation of the CWA and EPA's authority under section 303(d). As stated in section I.A.2. of this preamble, EPA believes that the CWA does require that States, Territories, or authorized Tribes list waters impaired regardless of the source, except for the statutory exception for those waters where the installation of technology-based treatment will attain and maintain water quality standards. Accordingly, today's rule provides more examples of the types of sources, including atmospheric deposition and ground water, that may cause impairments requiring placement of the waterbody on the section 303(d) list.

EPA continues to believe that there are merits in ensuring that the States, Territories and authorized Tribes have a complete accounting of impaired waterbodies and that the public should be able to have access to the list. As EPA explained in the preamble to the proposed regulations, there should be a close relationship between the information that States, Territories, or authorized Tribes used to develop the section 305(b) list and the information used to establish the section 303(d) list. Indeed, one requirement of § 130.22 is that States, Territories, or authorized Tribes evaluate and consider their most recent section 305(b) report in developing their section 303(d) lists of impaired waterbodies. Therefore EPA does not believe that requiring the more complete section 303(d) list imposes an undue burden on the States, Territories, or authorized Tribes because they are using water-quality related data and information that they have in hand and may have already evaluated for their section 305(b) report. In addition, as discussed later in this preamble, EPA is providing States, Territories and authorized Tribes with significant flexibility in the way they can provide the list to EPA which will further alleviate this burden.

Today's rule at § 130.25(a) also recognizes that the existing and readily available water-quality related data and information used by States, Territories and authorized Tribes for environmentally-related measurement or data generation must include appropriate quality assurance and quality control. EPA's grant regulations require that when grantee projects, such as State and Territorial water quality work using CWA section 106 funds, involve environmentally-related measurement or data generation, the grantee shall implement quality assurance practices that produce data of quality adequate to meet the project objectives. 40 CFR 31.45. Similarly, any monitoring or analysis activities undertaken by a Tribe with EPA funds must be performed in accordance with quality assurance/quality control practices.(§ 130.10). Therefore, EPA believes that it is consistent with the current requirements for how States, Territories and authorized Tribes consider data to recognize that the existing and ready available data and information must include appropriate quality assurance and quality control.

H. How do you Apply Your Water Quality Standards Antidegradation Policy to the Listing of Impaired Waterbodies? (§ 130.26)

What did EPA propose? EPA proposed to clarify how State, Territorial and authorized Tribal antidegradation policies should be used in identifying and listing impaired and threatened waterbodies under section 303(d). As described in the preamble to the proposed rule, antidegradation policies and associated implementation procedures are an essential part of State, Territorial and authorized Tribal water quality standards and are required under Part 131. The preamble further described the relationship between the section 303(d) listing requirements and antidegradation policies. EPA proposed requiring that any decline in water quality for Outstanding National Resource Waters (ONWRs) waterbodies would represent an impairment, and that such waterbodies should be identified and listed. EPA also proposed requiring identification and listing of unimpaired waterbodies as threatened when trend data and information indicated that a designated use would not be maintained and protected by the time of the next listing cycle. For all waterbodies, EPA proposed requiring identification and listing of waterbodies as impaired where the designated use, or a more protective existing use, was not maintained. An existing use is a use actually attained in the waterbody on or after November 28, 1975 (when the Water Quality Standards regulations were published), whether or not the use is included in the Water Quality Standard. See § 131.3(e). EPA also proposed listing such waterbodies as threatened when trend data indicated the designated use, or a more protective existing use, would no longer be attained at the end of the next listing cycle.

What comments did EPA receive? EPA received a number of comments specific to the use of antidegradation policies in identifying and listing threatened and impaired waterbodies. Many commenters disagreed that the definition of water quality standards in the CWA and Part 131 includes an antidegradation policy, thereby asserting that EPA does not have the authority to impose such policy on States and that antidegradation policies cannot serve as a basis for listings under section 303(d). Other commenters asserted that antidegradation policies, while part of water quality standards, are intended to apply only to waters that already attain water quality standards and thus antidegradation policies should not be considered when identifying and listing impaired waterbodies. Several commenters believed that ONRW waterbodies should not be listed as impaired based on a measurable change in water quality since there was no exceedance of a water quality standard; others asserted it was illogical since a decline in water quality could be temporary. Several commenters believed that EPA should remove the protection of existing uses from the water quality standards regulation. Several commenters believed that EPA should not require listing of threatened waters on the basis of a decline in water quality in unimpaired waterbodies, since EPA explicitly allows for a lowering of these waters' quality to accommodate important social and economic development. Finally, many commenters asserted that EPA lacks the statutory authority to require listing of threatened waters.

What is EPA promulgating today? After carefully considering the comments received on the use of State, Territorial and authorized Tribal antidegradation policies in identifying and listing impaired and threatened waterbodies, EPA is promulgating the following requirements. First, ONRW waterbodies are impaired and must be listed when the water quality of such waterbodies has declined. Second, any waterbody not maintaining a designated use or more protective existing use is impaired and must be listed. Consistent with the decision not to require listing of threatened waterbodies, EPA is not including in the final rule the proposed provision requiring listing of unimpaired waterbodies that are determined to be threatened based on adverse trend data and information.

EPA rejects the assertion made by many commenters that antidegradation policies are not part of water quality standards and that EPA lacks the authority to promulgate such policies for States, Territories or authorized Tribes. As described in the preamble to the proposed rule, antidegradation policies are a required element of State, Territorial and authorized Tribal water quality standards. The preamble to the Advance Notice of Proposed Rulemaking to the Water Quality Standards Regulation discusses at length both the statutory and regulatory basis for these longstanding requirements. (63 FR 36779–36787. July 7, 1998). Further, EPA has in the past, and may in the future, promulgate replacement Federal water quality standards when State, Territorial or authorized Tribal water quality standards do not include an antidegradation policy which provides protection of water quality consistent with the Federal antidegradation policy at § 131.12. (§ 131.32, 61 FR 64816 December 9, 1996). Quite simply, antidegradation policies are part of water quality standards.

EPA also rejects commenters' assertions that antidegradation policies should not be considered when identifying and listing impaired waterbodies because they apply only to waters that already attain water quality standards. As discussed in the preamble to the proposed rule, § 131.12(a)(1) requires that existing uses and the water quality necessary to protect them be maintained and protected. This is the fundamental level of water quality protection, applicable to all waters of the U.S., established by the Federal antidegradation policy. While existing uses and designated uses may be equivalent, this is not always the case. (63 FR 36751, July 7,1998). For example, a waterbody may be designated as a warm water fishery, but in reality be supporting a cold-water fishery, a more protective existing use. While the cold-water fishery has not yet been adopted as the designated use, as the existing use it must be maintained and protected. The intent of § 131.12(a)(1) is to ensure that the more protective existing use is maintained and protected. In this example if the cold-water fishery is an existing use and is impaired prior to its adoption as the designated use in the water quality standards, such impairment is a failure to meet an

existing use and the water must be listed. Therefore, EPA believes that waterbodies which are not maintaining designated uses or more protective existing uses are impaired and must be listed under section 303(d).

EPA rejects the suggestion to remove protection of existing uses. To the extent this comment is related to the water quality standards regulations, it is outside the scope of today's action. EPA recognizes the inherent challenges associated with identifying and protecting existing uses. However, EPA has long-standing requirements for the protection of existing uses—prohibiting the removal of existing uses and requiring the adoption of designated uses consistent with existing uses. The existing requirement that water quality necessary to protect existing uses be maintained and protected will ensure that past or present water quality, at a minimum, will be maintained and protected. Requiring listing of waterbodies that are not maintaining designated uses or more protective existing uses as impaired is not only consistent with these longstanding requirements, but further clarifies and strengthens the protection of existing uses.

EPA disagrees that degradation of the ONRW waterbody does not constitute an exceedance of a water quality standard. Section 131.12(a)(3) establishes the highest level of protection for waterbodies by prohibiting the lowering of water quality. Thus, the level of water quality present at the time a waterbody is classified as a ONRW water, even that which exceeds the threshold for designated use attainment, must be maintained and protected. The only exception to this prohibition, as discussed in the preamble to the water quality standards regulation (54 FR 54100, November 8, 1983), is for activities that result in short-term and temporary changes. EPA guidance has not defined short-term or temporary, but views these terms as limiting water quality degradation for weeks or months, not years, with the intent of limiting degradation to the shortest possible time. For an ONRW waterbody the applicable standard is the prohibition on lowering of water quality. Therefore, EPA believes that when degradation to a waterbody classified as an ONRW occurs (beyond that which is short-term and temporary), such waterbody is impaired and must be listed under section 303(d). EPA acknowledges that an ONRW waterbody may have very high water quality which far exceeds the threshold required for attainment of its designated use. However, the level of protection established by Tier 3 is intended to maintain that level of water quality into the future. EPA notes that classification of any individual waterbody as an ONRW is solely at the discretion of the State, Territory, or authorized Tribe.

I. What is the Format and Content of the List? (§ 130.27)

What did EPA propose? EPA's proposal at § 130.27 would have established a specific format and content for States, Territories, and authorized Tribes to follow, which organized the types of waterbodies included on the list and clearly identified which waterbodies would require the establishment of TMDLs. The proposed rule would have required that a list consist of four parts:

Part 1—Waterbodies impaired or threatened by one or more pollutants or unknown causes for which TMDLs would be required .

Part 2—Waterbodies impaired or threatened by pollution for which TMDLs would not be required.

Part 3—Waterbodies for which EPA has approved or established a TMDL and water quality standards have not yet been attained.

Part 4—Waterbodies that are impaired, but for which implementation of technology-based or other enforceable controls are expected to result in attainment of water quality standards by the next listing cycle. A TMDL would not be required for waterbodies on this part of the list.

EPA explained its belief that these four parts were necessary because the list no longer would include only waterbodies for which TMDLs were required. EPA wanted to ensure that the public and stakeholders would be aware of the different regulatory treatment afforded waterbodies depending on the basis of their inclusion on the various parts of the list.

EPA also specifically requested comments on the advisability of identifying specific situations where the proposed technical conditions for establishment of TMDLs are not met, what those situations might be and whether EPA should include waters impaired by pollutants in such circumstances on a separate part of the list. These comments are addressed fully in the Response to Comments Document and in section II.M. of this preamble.

What comments did EPA receive? EPA received many comments on the proposed format and content. In general, the same commenters who opposed the broader scope of the list also opposed the four parts proposed in § 130.27 for the same reasons—lack of statutory authority and burden for the States. These commenters suggested that EPA maintain the current regulation requiring a one part list of waterbodies impaired by a pollutant or pollutants, and for which a TMDL is required.

Some commenters who supported the proposed broader scope of the list also supported the four part list of impaired waterbodies. However, many commenters opposed the establishment of the Part 4 component of the four-part list. Some opposed it because they believed that all waterbodies impaired by a pollutant, for which a TMDL has not been established, should be listed on Part 1. Others opposed it, because they believed that the States should not have to list impaired waterbodies where a pollution control mechanism was being implemented.

Several commenters supported the establishment of the Part 4 component, but did not agree that only enforceable controls should be determinative for inclusion of waterbodies on Part 4. Many of these commenters stated that voluntary measures, including community-based initiatives and incentive-based measures should also qualify a waterbody for inclusion on Part 4.

EPA received numerous comments concerning the proposed requirement that a waterbody on Part 4 must attain water quality standards by the next listing cycle, or be moved to Part 1. They expressed the view that one listing cycle might not be a sufficient amount of time to achieve water quality standards, and that as long as reasonable progress towards attainment was being made, the waterbody should remain on Part 4. In contrast, several commenters supported the proposed requirements, based on their belief that one listing cycle should be sufficient to determine whether other controls were adequate to attain water quality standards.

A number of commenters were concerned about the implications of EPA's proposal to require the listing of waterbodies where impairment was caused by an unknown pollutant on Part 1. They were concerned that States would list waterbodies for broad and unspecified reasons, which would hinder the establishment of a TMDL.

Some commenters advocated tracking impaired waterbodies that met the

definition of EPA's proposed Parts 2, 3, and 4 by way of other existing reporting mechanisms (*e.g.,* the section 305(b) report). These commenters expressed support for identifying impaired waterbodies for any reason, but expressed a preference that section 303(d) be used only to address those waterbodies for which a TMDL is required.

What is EPA promulgating today? After analyzing all the comments received, EPA is making a number of significant changes to the proposed language but is retaining the concept that the list must be divided into four parts. EPA believes that the distinctions provided by the four parts are important to address some of the concerns expressed by commenters that the list would be confusing to the public and could lead some to believe that TMDLs were required for every waterbody on the section 303(d) list. EPA also believes that each part is important for different reasons. Parts 1, 3 and 4 will provide valuable information regarding the progress made by waterbodies impaired by pollutants. Progress in establishing TMDLs can be tracked by following the movement of waterbodies from Part 1 to Part 3 of the list. Effectiveness of control measures should result in waterbodies removed from Part 3 or Part 4 and from the list altogether. If control measures are effective, very few waterbodies should move from Part 4 to Part 1 or from Part 3 back to Part 1; the final regulations clarify circumstances which would warrant such changes. Part 2 helps ensure that stakeholders are aware of the extent to which waterbodies in a State, Territory, or authorized Tribe are impaired by pollution. In addition, if States, Territories or authorized Tribes decide to list the waterbodies which they anticipate will become impaired before the next listing cycle, and such waterbodies are included on Part 1, they must also include them in the prioritized schedule for TMDL establishment.

Today's final rule also requires that Part 3 waterbodies be moved to Part 1 of the list if a State, Territory, or authorized Tribe, or EPA determines that the waterbodies are not showing substantial progress towards attainment of standards. This review could be part of the analysis conducted by a State, Territory, or authorized Tribe for its section 303(d) list submittal. If a State, Territory, or authorized Tribe, or EPA determines that such progress is not occurring, then the State, Territory, or authorized Tribe must include the waterbody on Part 1 on the next section 303(d) list and revise the schedule to identify when the new TMDL will be established. This provision is consistent with EPA's proposal that TMDL implementation plans contain a description of when TMDLs must be revised, and is intended to ensure that such revisions will occur as envisioned by the implementation plan, and when otherwise appropriate. Thus, as part of their consideration of existing and readily available water quality-related data and information, States, Territories, and authorized Tribes must also consider any such data and information regarding Part 3 waterbodies and their progress towards attainment of standards. If, in that review, there is data or information that shows substantial progress is not being made, the waterbody must be moved to Part 1.

This provision is particularly important for waterbodies with TMDLs established prior to the effective date of today's rule or under the pre-existing regulations within 18 months of publication of today's rule because these TMDLs are not required to include implementation plans. Therefore, if there is data or information available to the State, Territory, or authorized Tribe that shows such waterbodies are not making substantial progress towards attainment of standards, the State, Territory, or authorized Tribe must include the waterbody on Part 1 and schedule a new TMDL. The new TMDL should be better able to achieve water quality standards, since it will be required to contain an implementation plan that meets the requirements of § 130.32(c).

EPA will use the TMDL implementation plan to assess whether the waterbodies on Part 3 of the list exhibit substantial progress towards attainment of water quality standards. As required by § 130.32(c), each TMDL established in accordance with today's rule will include a monitoring and/or modeling plan and criteria to determine whether substantial progress toward attaining water quality standards is not occurring and the TMDL needs to be revised. EPA will use the modeling and monitoring information and criteria to assess progress. For TMDLs established prior to the effective date of today's rule or prior to the end of the transition period described in § 130.37, EPA and the State may consider information from section 305(b) reports and other available water quality information along with information on implementation of wasteload and load allocations to determine whether the waterbody is making substantial progress. In this review, EPA will also consider the pollutant controlled by the TMDL and the size and expected response of the waterbody to changed loads.

The final rule requires that waterbodies that are expected to attain and maintain water quality standards by the next listing cycle through implementation of technology-based effluent limits or other enforceable controls (best practicable control technology and secondary treatment) be listed on Part 4 of the list. EPA believes that there is a benefit to the public of knowing that these waterbodies, though currently impaired, are expected to attain and maintain water quality standards once the technology-based requirements are implemented.

EPA continues to believe that impaired waterbodies can only be placed on Part 4 of the list (1) if they are subject to technology-based requirements of the CWA or other enforceable controls, and (2) for one listing cycle. Part 4 of the list can be construed as an exception to the requirement that TMDLs must be established for all waterbodies impaired by a pollutant or pollutants. Therefore EPA believes that it is appropriate to limit the scope and duration of this exception. Although EPA strongly supports the use of voluntary programs to resolve many impairment situations, EPA believes that enforceable controls will simplify the States, Territories and authorized Tribes' task of demonstrating that water quality standards will be attained within the relatively short period between listing cycles. Similarly EPA believes that a clear cut endpoint to this exception is necessary to ensure that the enforceable controls are sufficient to attain water quality standards.

EPA disagrees with commenters who stated that EPA lacks authority to require listing of impaired waters under the Clean Water Act. EPA's analysis is described in the preamble to the proposed rule. 64 FR 46020–23, August 23, 1999. In particular, EPA disagrees with the reading of section 303(d)(1)(A) as limited to waters that may need water quality-based effluent limitations, *i.e.,* only waters that are not meeting standards due to point source discharges. First, EPA disagrees that the use of the word "effluent limitations" in section 303(d) requires a reading of this section as limited to waters with sources that have effluent limitations. Rather, the term "effluent limitation" must be read in the context of the rest of section 303(d). Read in that context, EPA believes that Congress intended to exclude from listing only those waters where such limits are sufficient to implement standards, but did not mandate excluding any other categories

of waters. In the absence of plain language mandating such an exclusion, EPA believes that a reasonable interpretation of section 303(d), consistent with the broader goals of the Act, is that all other waters can be required to be listed, since all are waters where effluent limits are insufficient to implement standards.

In addition, there is no other indication in the statutory language that section 303(d)(1)(A) only requires listing of waters that require water quality-based effluent limitations. In fact, such limitations are to be established under a different section of the Act (section 302(a)), which is not mentioned in section 303(d). Moreover, EPA disagrees that the legislative history referenced by one commenter supports a different interpretation. The commenter notes that the legislative history of section 303(d) reveals a clear Congressional intent to provide a mechanism for establishing water quality effluent limitations. However, the commenter points to a statement in the legislative history that describes the section 302 process for establishment of water quality-related effluent limitations for a single point source or a group of point sources, not listing of waters under section 303(d). The legislative history simply describes the basis on which more stringent effluent limitations will be set (*i.e.*, the reduction needed to make the total load of the discharges from municipal and industrial sources consistent with water quality standards) under section 302(a), and does not support the proposition that only waters that need water quality-based effluent limitations should be listed under section 303(d). See H.R. 92–911 at 105–106, March 11, 1972.

EPA also believes its interpretation of section 303(d) is a different situation than the interpretation of section 211(k)(6) of the Clean Air Act addressed in *American Petroleum Institute* v. *EPA*, 198 F.3d. 275 (D.C. Cir. 2000). In that case, the court struck down EPA's interpretation of the phrase "marginal, moderate, serious, or severe" ozone nonattainment areas in the Clean Air Act to include other areas not classified as marginal, moderate, serious, or severe. In today's action, EPA is not interpreting a statutory phrase intended to circumscribe the limits of the availability of a regulatory option, as it was in the regulation at issue in the *API* case (in that case, the ability to opt-into the federal reformulated gasoline program). Rather, EPA is interpreting the language of section 303(d) to identify the universe of waterbodies that Congress clearly intended not be listed, and believes that universe consists of only one category of waters—those for which effluent limitations required by sections 301(b)(1)(A) and (B) are sufficient to implement standards. This is not a situation where Congress "makes an explicit provision for apples, oranges, and bananas," and therefore was "unlikely to have meant grapefruit." *Id.* at 278, citations omitted. Rather, it is a situation where Congress identified only a particular category to be excluded, and remained silent on what should be included. In light of the Act's silence on the waters that must be listed, EPA believes a reasonable interpretation is to require all waters not meeting standards to be listed. This ensures that such waters will have TMDLs developed if appropriate, and will otherwise have their water quality problems identified, tracked, and addressed.

Under this interpretation, each part of the list is authorized to be required by the Act, since none of the categories include waters expressly excluded by Congress. First, Part 1 includes those waters that are not meeting standards in spite of required effluent limitations, due to pollutants. Second, Part 2 also includes waters that are not meeting standards in spite of required effluent limitations, due to pollution where there is no pollutant causing or contributing to the impairment. Third, Part 3 includes waters that are not meeting standards in spite of required effluent limitations, where a TMDL has been completed. Fourth, Part 4 includes waters that are not meeting standards in spite of required effluent limitations, due to pollutants, where TMDL development need not be immediately scheduled because required controls on point and/or nonpoint sources are expected to result in achievement of standards by the next listing cycle. Thus, none of these categories include waters expressly excluded by Congress in Section 303(d), and all include waters not meeting standards. In light of the overall goals of the Act, EPA believes it is appropriate to require these waters to be listed to help ensure that they will ultimately meet standards.

EPA also disagrees that it lacks statutory authority in particular for requiring listing of Part 2 waters. Some commenters who opposed this provision argue that the reference to "pollution" in the second sentence of section 303(d)(1)(A) refers to the consequence of introducing pollutants rather than requiring the listing of waterbodies impaired by pollution. EPA disagrees, and believes that its interpretation of the statutory language is a reasonable one. EPA also notes that it is not relying solely on the presence of the word "pollution" in the second sentence of section 303(d)(1)(A) to support its authority to require listing of Part 2 waters. EPA's analysis of section 303(d) to authorize listing of waters beyond those requiring water quality-based effluent limitations is described above. The presence of the word "pollution" is simply additional indication that Congress did not intend to exclude Part 2 waters from the listing requirement, and provides further support for EPA's authority to require them to be listed. EPA believes that its interpretation of the presence of the word "pollution" is reasonable and more consistent with the goals of the Act than commenters' interpretation.

Finally, some commenters misconstrue statements EPA made in the proposal. The commenters state that the proposal recognizes that the reach of the section 303(d) list is co-extensive with the waters requiring TMDLs, based on a statement in the proposal regarding development of TMDLs for waters with nonpoint sources of pollutants. However, this statement was made to explain that there is no express exclusion of nonpoint source waters from section 303(d)(1)(A), and therefore such waters are not automatically excluded from the requirement to develop TMDLs. EPA's statement in the proposal was made to explain why TMDLs are required for nonpoint source pollutants, and was not an assertion that only waters that need TMDLs may be listed. In fact, EPA also states clearly in the proposal that its interpretation of the listing obligation is not limited to only those waters needing TMDLs. See 64 FR 46022 ("While EPA interprets section 303(d) to require identification of all waters not meeting water quality standards * * * EPA interprets section 303(d) to require that TMDLs only be established where a waterbody is impaired or threatened by a pollutant.")

The final regulations also clarify that when biological information indicates that waterbodies are impaired but the pollutant is unknown, these waterbodies should be placed on Part 1 of the list unless data and information clearly indicate that pollution, not a pollutant, is the cause of the impairment.

Waterbodies may be removed from Part 1 in several ways. If a TMDL is established and approved by EPA, the waterbody may be moved to Part 3 of the list for the pollutant the TMDL addresses. In the absence of a TMDL, if new data or information shows that the waterbody is meeting the applicable water quality standard for a particular pollutant, the waterbody may be

removed from the section 303(d) list for that pollutant.

EPA agrees with the commenters who suggested that information on Parts 2, 3 and 4 could be submitted as part of the section 305(b) report. The final regulations provide States, Territories and authorized Tribes with the flexibility to submit their list in any of three ways: as a stand alone list, as a clearly identified component of the section 305(b) report or in two sections: Part 1 as a stand alone list with Parts 2, 3 and 4 clearly identified in the section 305(b) report. Regardless of which format the States choose, the information must be consistent with the requirements of §§ 130.22, 130.25, 130.26, 130.27, 130.28, and 130.29. EPA will review and approve or disapprove all four parts of the list. When States, Territories or authorized Tribes elect to submit all or part of their list as a component of the section 305(b) report, it is only the information required by §§ 130.27 and 130.28 that is considered to be part of the section 303(d) submittal. EPA recognizes that the section 305(b) report includes information other than that required by §§ 130.27 and 130.28; this additional information is not considered as part of the section 303(d) list.

No matter which reporting format a State, Territory, or authorized Tribe chooses, EPA will take action on the entire list (*i.e.*, all four parts). These two options are included for the sole purpose of providing flexibility to those States that wish to coordinate their section 305(b) reports with their section 303(d) lists. While joint reporting of the section 305(b) report and the section 303(d) list is not required, coordination of the two reports provides benefits for States, Territories, and authorized Tribes willing to use this option. These benefits include eliminating possible redundancy in monitoring, assessing, and reporting on the condition of water quality for two related CWA requirements. They also include using limited monitoring resources more efficiently which may free resources to increase the numbers of waterbodies assessed and improve the quality of the data collected. Under the regulations, the most recent section 305(b) report is considered to be existing and readily available information that a State, Territory, or authorized Tribe must consider in assembling the section 303(d) lists and the methodology must describe how the section 305(b) report will be considered in the listing process. EPA notes that, even under the two options for the list format that allow for full or partial consolidation with the section 305(b) report submission, the regulations do not require that all waters identified as not meeting standards on the section 305(b) report be included on the section 303(d) list.

Finally, EPA is making a minor change to the proposed language of § 130.27(c) which would have required EPA and States to agree on the georeferencing system used to identify the geographic location of the impaired waterbodies. The final regulations require that States use either the National Hydrography Database or subsequent revisions, which is the system used by EPA and the U.S. Geological Survey or a compatible system.

J. What Must the Prioritized Schedule for Submitting TMDLs to EPA Contain? (§ 130.28)

What did EPA propose? In the proposal, EPA included proposed § 130.28 dealing with how States should prioritize the impaired waterbodies on Part 1 of their list and proposed § 130.31 which would have required States to provide to EPA a schedule depicting when TMDLs would be developed. Both the priority rankings and the schedule would have had to be submitted to EPA at the same time as the list but EPA proposed to only approve the list and priority ranking, not the schedule.

In § 130.28 EPA proposed that States, Territories, and authorized Tribes would assign either a high, medium or low priority to each waterbody and pollutant combination on Part 1 of the list. The proposal would have required States, Territories and authorized Tribes to consider in their priority ranking the two factors listed in section 303(d)(1) of the CWA, and the severity of the impairment and the designated use of the waterbody, and also listed a number of proposed optional factors. EPA further proposed that a high priority would have to be assigned to impaired waterbodies designated for use as public drinking water supplies, where the impairment was contributing to a violation of an Maximum Contaminant Level (MCL), and for waterbodies supporting a species listed as endangered or threatened under section 4 of the Endangered Species Act, unless the State, Territory, or authorized Tribe could demonstrate that the impairment did not affect the listed species. The proposal would have required States, Territories, and authorized Tribes to provide EPA with an explanation of how they had used the ranking factors in determining their priorities.

Section 130.31 of the proposal would have eliminated the current requirement that the listing submission include a list of the waterbody/pollutant combinations scheduled for TMDL development in the next two years. Instead, EPA proposed that States, Territories, and authorized Tribes be required to submit with Part 1 of their list comprehensive schedules for establishing TMDLs for all waterbody/pollutant combinations on Part 1 of their list as expeditiously as practicable and no later than 15 years after the initial listing with a reasonably paced workload and generally in accordance with their priority rankings. EPA also proposed to recommend, but not require, that TMDLs for high priority waterbody/pollutant combinations be established first.

What comments did EPA receive? EPA received a significant number of comments specific to the proposed priority ranking requirements. Several comments supported EPA's proposal, others, however, objected to this provision, for one of two reasons. Some comments said EPA should give States the flexibility to prioritize their waterbody/pollutant combinations anyway they choose. Others objected to this provision because of their opinion that a high, medium and low priority ranking was insufficiently precise.

There were a wide variety of comments with regard to the factors that should be employed in priority rankings of waterbody/pollutant combinations. Some comments said that only the two factors cited in section 303(d)(1) of the CWA—severity of impairment and uses of the waterbody—should be considered. Other comments said these two factors alone were too narrow to provide an adequate basis for ranking, and called for a variety of other factors to be considered. Some said that certain factors listed in EPA's proposed regulation—aesthetic, cultural, historic—should not be considered at all in priority ranking because they were not related to the goals and objectives of the CWA.

EPA received comments offering a variety of views on the issue of whether or not to specify certain factors that would automatically put a waterbody/pollutant combination in the high priority category. Some supported this concept in general, while other comments opposed it. Numerous comments objected to one or both of the two factors listed in EPA's proposal—presence of threatened or endangered species or contribution to a violation of an MCL in a waterbody designated for public water supply use. The most frequently expressed concern about the endangered species factor was the need to prove a negative (*i.e.* a pollutant is not harming the listed species). The most common criticism of the public

water supply ranking factor was that the EPA proposal seemed to be applying the Safe Drinking Water Act MCL in the raw water supply, rather than at the tap. Some comments, however, indicated that it was imperative to consider such situations as high priority, regardless of other, possibly mitigating, factors. Further comments suggested additional factors that should merit automatic high priority ranking for a waterbody/pollutant combination—waterbodies for which fish consumption advisories had been issued were mentioned several times in this regard.

EPA received numerous comments on the issue of schedules for TMDL establishment. Some comments supported retaining the existing regulatory requirement. Some comments said States should not have to provide any schedule for TMDL establishment while others supported the proposal. Several comments said that schedules laid out under a State's rotating basin/watershed approach, rather than priorities put forth in the proposal, should be the primary determinant of the schedule for TMDL development. Commenters were split on the issue of EPA review and approval of the schedule. A substantial number of comments said States should not get locked into the comprehensive 15 year schedules they would initially submit, and should be able to modify the schedules over time, to adjust to new information and changing circumstances. Some comments said that after the initial listing of a waterbody and pollutant combination, 15 years was a reasonable maximum time for TMDL establishment. On the other hand, quite a few comments said 15 years was far too long a period and recommended considerably shorter timelines for TMDL establishment. Still others said that 15 years might not be enough time for establishing certain types of TMDLs, particularly ones involving high degrees of complexity or difficult-to-address issues such as air deposition or legacy pollutants.

What is EPA promulgating today? Having considered the comments received on the proposal's provisions on priority ranking (§ 130.28) and scheduling (§ 130.31), EPA is promulgating a rule that requires States, Territories and authorized Tribes to develop and submit a prioritized schedule. This approach combines the two proposed provisions into one, § 130.28 of today's rule, entitled "What must your prioritized schedule for submitting TMDLs to EPA contain?" EPA is not promulgating the proposed requirement that waterbody/pollutant combinations be categorized into high, medium, and low priorities. Rather, today's rule requires that Part 1 of the list include a prioritized schedule for establishing TMDLs on Part 1 of the list. This change recognizes the close connection between prioritizing and scheduling waterbodies for TMDL development. Schedules are considered part of the list and subject to EPA review and approval.

Section 303(d) requires States to "establish a priority ranking" for the waters it identifies on the list, taking into account the severity of the pollution and the uses to be made of such waters, and to develop TMDLs "in accordance with the priority ranking." To implement this provision, EPA is requiring States, Territories and authorized Tribes to develop a schedule for TMDL establishment that identifies when each TMDL will be completed. In developing the schedule, States, Territories and authorized Tribes will need to decide which TMDLs are higher priority than others, taking into account the statutory factors identified above, as well as other relevant factors described in the regulations. EPA is not requiring States, Territories or authorized Tribes to specifically identify each TMDL as high, medium or low priority, since the scheduling process will require that each TMDL be ranked in priority order by date of development rather than by categorization as high, medium or low priority. The statute does not prescribe a particular method of establishing a priority ranking, and EPA believes that prioritizing by developing a schedule is a reasonable, efficient way to do this.

In particular, the schedule is preferable to simply requiring that waterbodies be categorized as high, medium or low priority, since it identifies a specific time frame within which the public can expect each TMDL to be developed, and thus better enables public participation in TMDL development because citizens can anticipate when work will happen on a particular TMDL that is of interest to them. Categorization would not necessarily inform the public when specific TMDLs are to be developed, but rather simply identifies which TMDLs the State, Territory, or authorized Tribe believes should be done first. In addition, requiring a prioritized schedule rather than categorization plus a schedule eliminates a step in the process that EPA believes is unnecessary and adds little value to the list. Once a schedule is developed, whether a State, Territory, or authorized Tribe believes a particular TMDL is of high, medium or low priority is unimportant and the relative priority of each TMDL will be apparent based on whether it is to be developed early or late in the schedule. The public will be able to comment on the time frame in which the State, Territory, or authorized Tribe intends to develop each TMDL. In this way the schedule provides the public better information on the State's, Territory's, or authorized Tribe's priority ranking for TMDL development than simply identifying waterbodies as high, medium, or low priority. Requiring a prioritized schedule eliminates the need for such categorization.

In today's rule, EPA is modifying the proposed regulations to require that the prioritized schedule for TMDL development be submitted as part of the section 303(d) list for EPA approval or disapproval. This approach is consistent with section 303(d) of the Act, which requires States, Territories, and authorized Tribes to both identify waters and establish a priority ranking for the identified waters as the first step in the process that is ultimately intended to result in the attainment of water quality standards. While the Act does not explicitly require EPA to approve or disapprove the priority ranking as part of the list submission, EPA believes that doing so is a reasonable exercise of its discretion to ensure that the goals of section 303(d) are achieved, consistent with EPA's authority under section 501(a) to adopt regulations necessary to carry out its functions under the Act. The priority ranking, embodied in the prioritized schedule required by today's regulations, is an essential step between the identification of waters and the development of TMDLs for waters that need them. The prioritized schedule ensures that TMDLs are developed at a reasonable, even pace and that the statutory factors (severity of pollution and uses to be made of the waters) are considered in deciding when particular TMDLs will be developed. Thus, because of the critical importance of the prioritized schedule in the overall section 303(d) process, EPA believes it needs to ensure that a State's, Territory's, or authorized Tribe's schedules are reasonable and consistent with the Act by reviewing and approving or disapproving the schedules as part of the list submissions, and establishing schedules in the event of a disapproval or a failure by the State, Territory, or authorized Tribe to do so.

For the sake of clarity the following discussion follows the structure of 130.28.

Expeditious Schedules (§ 130.28(b))

EPA is revising the proposal to require that establishment of TMDLs be evenly paced and as expeditious as practicable. In addition, States should schedule TMDLs no later than 10 years from July 11, 2000 or the initial listing date, which ever is later. The rule also provides that the schedule for specific TMDLs can be extended for an additional 5 years if a State, Territory, or authorized Tribe explains to EPA that the shorter schedule is not practicable.

EPA is shortening the proposed 15-year schedule to a requirement that the schedule be as expeditious as practicable and evenly paced, and that it should generally not extend beyond 10 years. As pointed out by many commenters, a ten year schedule is consistent with current EPA policy. See "New Policies for Establishing and Implementing Total Maximum Daily Loads," August 8, 1997. As stated in the 1997 policy memorandum, EPA was to work with States to help schedule TMDL establishment within 13 years, *i.e.,* by 2010. EPA believes that some States, Territories, or authorized Tribes can complete the TMDL development within 10 years, as evidenced by some current State schedules and by increased resources devoted to TMDL programs in many States as well as available through increased Federal funding. Currently, 46 States are developing TMDLs based on schedules of 13 years or less, 20 of which are developing TMDLs based on a 10-year schedule. Further, EPA believes that making this change is reasonable since the regulations also provide that the schedule can be extended up to an additional 5 years for a total of 15 years if the State, Territory, or authorized Tribe explains that it needs the additional time to complete the task.

A State, Territory, or authorized Tribe would need to explain why a 10-year schedule is not practicable. For example, a State, Territory, or authorized Tribe could show that, despite working expeditiously, given the number of TMDLs that are required, they will require more than 10 years to complete all TMDLs. The State, Territory, or authorized Tribe could also show that the complexity of one or more TMDLs might require more time to collect information to quantify loadings from sources or to secure commitments for loading reductions for sources outside the State, Territory, or authorized Tribe. In these cases, the State, Territory, or authorized Tribe may schedule some TMDLs within an additional five years.

By changing "reasonably paced" to "evenly paced", EPA intends that States, Territories, and authorized Tribes must schedule TMDL development in a way that reflects a generally even pace in establishing TMDLs over the length of the schedule. EPA recognizes that States, Territories and authorized Tribes will have valid reasons for establishing more TMDLs in some years and fewer TMDLs is other years. This may occur due to the varying degree of complexity and efficiencies which pertain to TMDL development in different watersheds in a State, Territory, or authorized Tribe. However, the general trend and pace of TMDL establishment across the schedule, after allowing for understandable year-to-year variation, should, with some exceptions, be generally even. While current schedules appropriately account for the ramp-up period needed for monitoring and other preliminary activities, EPA believes by April 2002 (when new schedules are required) that States, Territories, and authorized Tribes should be in a position to schedule TMDL development on a more even pace. Of course, application of this general requirement must account for additional time that may be needed to develop particularly complex or data-intensive TMDLs. In those cases, establishment of a smaller number of TMDLs may be justified. Similarly, the number of TMDLs may be larger in a year in which a State, Territory, or authorized Tribe concentrates on waterbodies for which a substantial amount of information has already been gathered.

The proposed approach, which would have required TMDLs to be established as expeditiously as practicable but no later than 15 years from the time the waterbodies were listed on Part 1, could have led to the unintended result that TMDLs for waterbodies included on Part 4 would be delayed if the waterbody was later moved to Part 1. EPA believes that TMDLs for waters included on Part 4, where enforceable controls ultimately fail to result in attainment of standard by the next listing cycle, should not be unnecessarily delayed. The addition of a Part 4 of the list was not intended to encourage or allow for such delay. In addition, it is reasonable to expect TMDLs for such waterbodies to be developed within 10 years (or up to 15 years, for certain TMDLs, as described above) of initial listing on any part of the list, since States, Territories, or authorized Tribes will be keeping track of progress on Part 4 waters to determine how well the enforceable controls are working and should be able to use this information to develop TMDLs for such waters well within the timeframe required by today's regulations.

The final rule also clarifies that the provision that States, Territories, and authorized Tribes should generally schedule all TMDLs no later than 10 years (with a possible 5 year extension) from the later of July 11, 2000 or the date of initial listing of the waterbody/pollutant combination on a section 303(d) list applies to waterbodies on a section 303(d) list prior to today's action. Thus, TMDLs for waterbodies that appeared on a section 303(d) list prior to today's action would need to be established no later than July 11, 2010, unless the schedule is extended as described above. This avoids unreasonably short deadlines for TMDL establishment for States, Territories, and authorized Tribes which happened to have listed a substantial portion of their impaired waters well before the promulgation of this rule. EPA believes it is appropriate to use the July 11, 2000 (*i.e.,* the date of signature of today's action) as the baseline date for the 10-year schedule provision since States, Territories, or authorized Tribes have not been, until now, required by regulation to identify schedules for TMDL development other than specifying TMDLs that will be developed in the next 2 years. While States, Territories, or authorized Tribes should have schedules at this time in response to a request from EPA ("New Policies for Establishing and Implementing Total Maximum Daily Loads," August 8, 1997), in light of the new requirements in today's rule, States, Territories, or authorized Tribes should have an opportunity to reassess their TMDL development obligations and develop an appropriate schedule. Requiring TMDLs to be scheduled 10 years from the original listing could penalize States who had established comprehensive lists by 1992 by allowing them less time to complete TMDLs than those States, Territories, or authorized Tribes that more recently developed more comprehensive lists.

Identification of TMDLs to be Established (§ 130.28(c))

Today's rule provides more specificity regarding the minimum level of detail required in schedules for establishment of TMDLs than did the proposal. Today's rule requires States, Territories, and authorized Tribes to indicate in their schedule which specific TMDLs will be completed in each year of the schedule. EPA has chosen to require scheduling of TMDLs in year blocks to

provide sufficient detail to allow all those involved in TMDL development to plan for the workload involved at various points in time. States, Territories, and authorized Tribes can change the order of TMDL establishment within any year period without consulting with EPA or seeking EPA approval. EPA will approve schedules if they reflect the priority factors and timeframes outlined in the rule. The schedules must also demonstrate that establishment of TMDLs is as expeditious as practicable and evenly paced over the duration of the schedule.

EPA realizes that it is possible that States, Territories, and authorized Tribes will not be able to meet even this less precise schedule for each and every TMDL they must establish, and expects that States, Territories, and authorized Tribes will need to avail themselves of the opportunity to adjust schedules for TMDL establishment to reflect new information and other changing circumstances, and that such adjustments will be reflected in each subsequent list submitted on April 1 every fourth year. As long as States, Territories, and authorized Tribes establish each TMDL on Part 1 of their list as expeditiously as practicable and the revised list reflects even pacing of the overall TMDL establishment task, within the timeframes specified in the regulations, taking the required factors into account, EPA will approve such schedule modifications without requiring that the entire schedule be revised.

When a State, Territory, or authorized Tribe must develop multiple TMDLs within a watershed, EPA encourages the State, Territory, or authorized Tribe to schedule the TMDLs to be established at roughly the same time. This coordinated approach makes use of any efficiencies in coordinating monitoring, water quality analyses, implementation and public participation. It also helps integrate the establishment of TMDLs with the use of rotating basin or watershed approaches for restoring water quality. EPA is encouraging States, Territories and authorized Tribes to use a coordinated approach by making it one of the factors that may be considered and by including in the final rule language that explicitly recommends that States, Territories and authorized Tribes use this approach.

Priority Factors (§ 130.28(d), (e) (f))

The final rule incorporates the prioritizing scheme of the proposal into the final requirements for a prioritized list. The final rule retains the concept that the statutory factors of severity of impairment and designated use of the waterbody should form the basis for prioritizing waterbodies. In addition, the final rule requires States, Territories, and authorized Tribes to consider drinking water uses and presence of a threatened or endangered species as higher priorities. However, the final rule does not require that an impairment at a public drinking water supply or the presence of threatened or endangered species be an automatic high priority for TMDL establishment. Rather, the State, Territory, or authorized Tribe may give waterbodies with these two factors present a lower priority (*i.e.,* a later date for TMDL development) if the State, Territory, or authorized Tribe explains why this is appropriate. As another example, biological information might be available to allow a State, Territory, or authorized Tribe to show that other factors are the stressors to the threatened or endangered species.

Also, EPA is not including in today's rule the proposed language that strongly encouraged States, Territories, and authorized Tribes to establish all TMDLs for high priority waterbody/pollutant combinations before completing TMDLs for medium or low priority combinations. These provisions have become moot because today's final rule does not include a requirement for ranking each waterbody/pollutant combination as either high, medium or low priority. Rather, a date must be specified for TMDL development for each waterbody/pollutant combination on Part 1. Thus, rather than grouping each TMDL into one of 3 categories of priority States will rank each TMDL according to the most appropriate time frame for its establishment taking into account the factors described in this section. EPA believes that the prioritized schedules submitted by States, Territories and authorized Tribes, along with the explanations of how various factors were utilized in the development of such schedules, will serve the same purpose as the provisions it eliminated.

K. Can the List be Modified? (§ 130.29)

What did EPA propose? EPA proposed at § 130.29 to adopt the FACA Committee's recommendations that waterbodies should remain listed until water quality standards were attained, and that a previously listed impaired or threatened waterbody could be removed from the list at the time of the next list only when new data or information indicated that the waterbody has attained water quality standards.

What comments did EPA receive? Many commenters supported the regulations as proposed. Several commenters strongly encouraged EPA to allow for immediate removal of waterbodies that met the de-listing requirement (*i.e.* in the interim period between listing cycles) especially if the Agency decided to promulgate a four or five year cycle for the listing requirement. This reflected a concern that waterbodies that were not impaired would remain on the lists for several years, leaving the public with an incorrect impression about the condition of the waterbody. There was also a fear that States, Territories, and authorized Tribes would elect to, or be forced to, move ahead with development of TMDLs for such waters, even though they were no longer needed. A number of commenters suggested that the information requirements for removing a waterbody from the section 303(d) list should be no more rigorous than the requirements for listing a waterbody. Other commenters suggested that States, Territories, and authorized Tribes should be able to add some waterbodies between the times when the full lists are required. Commenters also asked that the regulations specify that the methodology and public participation requirements should apply to delisting. Finally, several commenters reiterated that waterbodies should not be removed from the section 303(d) list just because a point or nonpoint source control measure was implemented but had to remain listed until water quality standards were met.

What is EPA promulgating today? EPA generally agrees with the comments it received on this section. EPA agrees that States should be able to remove waterbodies from a list at times other than those when full lists must be submitted to EPA. This is consistent with section 303(d) which requires States, Territories, and authorized Tribes to submit lists of waters "from time to time." EPA has previously interpreted section 303(d) to allow removal of waterbodies that attain water quality standards at times other than when they make their biennial list submissions. See "Guidance for 1994 Section 303(d) Lists," November 26, 1993. By extension, EPA believes that the same flexibility should be provided for adding waterbodies to the list. Therefore EPA has reshaped this section in the final regulation to cover modifications of the list (*i.e.* listings, delistings and changes to the prioritized schedules). These provisions regarding modifications to the list at times other than required list submissions do not alter what is permitted under the pre-existing regulations. EPA is simply

adding regulatory language to clarify that States may modify their lists at times other than required submissions and to clarify the procedure for doing so. EPA is maintaining the proposed requirements that waterbodies must remain on the list until water quality standards are attained.

EPA is also adding a § 130.29(e) which specifies that changes to the schedule for TMDLs which the State, Territory, or authorized Tribe make must be considered a modification of the list if they involve rescheduling establishment of a TMDL from one year to another. Changes to the list are subject to EPA review and approval/disapproval. EPA notes that these modifications to the list may be time consuming and expects that States, Territories, and authorized Tribes will use these provisions no more than once a year, mostly to remove waterbodies which have attained water quality standards from the list.

EPA is adopting regulatory language to clarify the specific requirements that apply when a State, Territory, or authorized Tribe modifies its list in between required list submissions. First, the regulations provide that the scope of public notice and opportunity for comment on the modification shall be limited to the waterbodies and issues raised by the modification. For example, if the State, Territory, or authorized Tribe develops a draft list modification that removes certain waterbodies based on new information collected since the prior list submission, the public notice and the opportunity for comments would be limited to those particular waters and the water-quality related data the State, Territory, or authorized Tribe believes warrants removal from the list. Neither the State, Territory, or authorized Tribe nor EPA would be obligated to address comments on the remainder of the list or other unrelated waters. As another example, if the State, Territory, or authorized Tribe proposes to add or remove certain waterbodies based on a change to the methodology used in the prior list, the public notice and opportunity for comments would be limited to such change and to any waterbodies affected by it. Neither the State, Territory, or authorized Tribe nor EPA would be obligated to address comments on other aspects of the methodology or other unaffected waters.

When submitting list modifications, the same provisions apply to removal of waterbodies as for required list submissions. A State, Territory, or authorized Tribe may remove a listed waterbody only if new water-quality related data or information indicates it is attaining and maintaining applicable water quality standards. A State, Territory, or authorized Tribe may add a waterbody to the list if there is data or information showing it is impaired. When developing a list modification, the State, Territory, or authorized Tribe must satisfy the same public process requirements that apply to required list submissions—the State, Territory, or authorized Tribe must provide adequate notice to the public of the draft list modification, must provide at least 60 days for public comments on the modification, and must address relevant comments in its submission of the modification to EPA.

However, EPA is not requiring prior submission of a methodology for each list modification. Because the methodology is generally required to be submitted at least two years before required list submissions (after allowing the public an opportunity to comment), EPA believes it would be overly burdensome to require submission of the methodology for each list modification, and would undercut the purpose of the modification provision, *i.e.,* to allow States, Territories and authorized Tribes to more easily make appropriate changes in their lists in between required submissions. Thus, States, Territories and authorized Tribes are not required to submit a methodology for the modification prior to the submission of the modification. EPA expects that in most cases the State, Territory, or authorized Tribe will use the same methodology used in the most recent required list submission for modifications. However, where the modification includes a change to the methodology, EPA expects that the modification provided to EPA will identify and explain such change so that EPA can consider it in its review of and action on the modification. In addition, when providing public notice of a modification that includes a change to the pre-existing methodology, the State, Territory, or authorized Tribe would need to identify and explain such change to the public since it would be the basis for resulting additions to or removals from the list.

EPA is including a provision in the regulations clarifying that a State's, Territory's, or authorized Tribe's revisions to their prioritized schedules must be considered modifications to the list and submitted to EPA as such. This is consistent with the definition of the list to include both the identification of waters and pollutants and the prioritized schedule for TMDL development. Revisions to the schedule would include moving any TMDL from any one-year period to another, and must be based on new information in accordance with the priority ranking. Thus, for example, a State, Territory, or authorized Tribe may receive new information regarding newly found sources of pollutants in a particular year and may decide on that basis to move certain TMDLs earlier or later in the schedule. Similarly, the State, Territory, or authorized Tribe may become aware that water-quality related data relevant to development of a particular TMDL will be available earlier than expected, and may therefore decide to move that TMDL earlier in the schedule. In either case, the State, Territory, or authorized Tribe must constrain the modification such that it establishes at least the same number of TMDLs in the first four year period. This requirement serves to ensure that the State, Territory, or authorized Tribe establish TMDLs at an even pace. EPA will review revisions to the schedule to determine if they are consistent with the regulatory provisions governing development of the prioritized schedule, and will approve or disapprove them as appropriate.

Some waterbodies are listed by States, Territories, and authorized Tribes for multiple impairments. When a State, Territory, or authorized Tribe has new water-quality related data or information showing that a waterbody attains water quality standards, it may be for only some of the pollutants causing the impairment. In this instance, the States, Territories, and authorized Tribes may remove only those pollutants from the list that no longer cause impairment, but cannot remove the waterbody itself until it has new water-quality related data or information showing that the waterbody attains water quality standards for all the impairments that caused the listing.

EPA interprets "new water-quality related data or information" to include new water quality data or water quality modeling information that supplements water quality data. EPA also interprets "new data or information" to include such instances as when the State, Territory, and authorized Tribe has revised the applicable water quality standard consistent with Part 131, EPA has approved that standard, and existing water quality data shows that the waterbody attains the new water quality standard. EPA also interprets "new data or information" to include where the State, Territory, and authorized Tribe can show that the existing data actually showed that the water quality standards were attained and that the waterbody was listed in error due to a transcription, typographical, or some other clerical error. Therefore, "new" is not limited to data or information

collected after listing. The intent of the new requirement is to ensure that listed waterbodies (or pollutants) are not removed in the absence of data or information indicating attainment of water quality standards.

EPA does not interpret "new data or information" to allow removal of a waterbody (or pollutant) in instances where a State, Territory, and authorized Tribe disputes the quality of the information or reinterprets the same information that it previously used to list a water on the section 303(d) list and concludes the data or information did not support a finding of impairment. EPA is not suggesting that States, Territories, and authorized Tribes use poor quality data to support listing waterbodies on the section 303(d) list. Rather, in the absence of data or information supporting a determination that a waterbody is attaining water quality standards, a waterbody should not be removed from the list. The one exception that would allow removal would be a waterbody that was listed incorrectly. EPA recognized this possible situation in the August 23, 1999, proposal. (64 FR 46024, August 23, 1999). EPA intended this to cover situations where a water was listed due to an error such as a transcription or typographical error, not a re-evaluation of data on which the waterbody was originally listed. EPA will consider State, Territories and authorized Tribes methodologies in approving or disapproving lists but it is not obliged to approve decisions simply because they are consistent with the methodologies.

Finally, EPA is adding § 130.29(g) to allow EPA to modify a list consistent with the provisions of paragraph (c), (d), and (e) of this section. As described in today's preamble, EPA at times may be required to establish a TMDL. In the course of developing the TMDL, EPA may find new information that shows that the waterbody should not be listed on Part 1 of the list and a TMDL is not necessary. For example, EPA could find that, based on new data or information, the waterbody is attaining and maintaining the applicable water quality standards. This is the criterion that allows a State, Territory, or authorized Tribe to remove the waterbody/pollutant combination from the list. In this situation, the waterbody is not required to be listed and no TMDL is required. EPA could also find that, for waterbodies listed on the basis of biological information, the cause of the impairment is not a pollutant or pollutants, but rather some attribute of pollution. In this situation, the waterbody belongs on Part 2 of the list and no TMDL is required.

In examples such as these, there is no merit in developing a TMDL; yet in the absence of this new provision, the requirements of today's rule would have EPA establish the TMDL. For this reason, EPA believes it should have the same authority to modify a section 303(d) list to remove a waterbody/pollutant combination, in accordance with the same requirements that pertain to States, Territories, and authorized Tribes.

L. When Must the List of Impaired Waterbodies be Submitted to EPA and What Will EPA do With it? (§ 130.30)

What did EPA propose? EPA proposed that States, Territories, and approved Tribes would be required to submit their list of threatened and impaired waterbodies and the priority rankings of waterbody and pollutant combinations to EPA by October 1 at regular intervals. EPA noted that it was considering ranges of two, four or five years, for these intervals beginning with the year 2000. EPA proposed to maintain the current requirement that EPA review and either approve or disapprove a submitted list within 30 days of receipt. EPA also proposed to require States, Territories, and authorized Tribes to incorporate approved lists of impaired waterbodies in Water Quality Management Plans. Finally, EPA proposed to codify in the regulations its authority to establish lists for States, Territories, or authorized Tribes which do not.

What comments did EPA receive? The issue of how frequently States, Territories, and authorized Tribes should submit lists of impaired waters, priority rankings and schedules, was the subject of numerous comments. Regarding the frequency of submission of lists, priority rankings and schedules for TMDL establishment, five years was the most commonly supported period, with four years getting a large number of supporters. Retaining the current two year cycle also received a substantial amount of support.

Those supporting a longer listing cycle (more than two years) provided a variety of reasons for their position. A large number of commenters believed that a two year cycle forced States, Territories, and authorized Tribes to spend too much time preparing listing reports, thereby diverting limited resources away from developing and implementing TMDLs. Nearly as many commenters indicated that a longer cycle would enable States, Territories, and authorized Tribes to do a better job of assembling and interpreting data regarding the condition of waterbodies. Others observed that it is unusual for the condition of a waterbody to change measurably in just two years, and having to prepare a report saying "no change" was not a wise use of resources. Some commenters thought that longer cycles would encourage efforts to implement pollution controls and thereby prevent waters from going on the list (or at least Part 1) in the first place.

Those supporting a five-year cycle noted the correlation with the five year term of NPDES permits and the five-year cycle employed by most States that have adopted the watershed/rotating basin approach. Those supporting a four-year schedule noted that this would correspond to every second section 305(b) report submitted by States, Territories, and authorized Tribes. On the other hand, some supporters of longer cycles called for establishment of interim milestones such as water quality monitoring or source identification, during the cycle, to ensure adequate funding and budgeting by States, Territories, and authorized Tribes.

Those supporting retention of the current two-year cycle offered a number of reasons in support of their position. Numerous commenters feared that longer listing cycles would serve to delay the date by which TMDLs were established for some waterbodies, which in turn would delay the date on which water quality standards were attained. For example, commenters were worried that lengthening the listing cycle would result in more waterbodies being placed on Part 4 of the list, and such waterbodies staying on Part 4 longer, yet ultimately failing to meet water quality standards by the next listing cycle, and still needing TMDLs. Quite a few comments said the public needed more frequent, not less frequent, reports on which waters were impaired.

Comments were split with regard to whether April 1 or October 1 of the "listing year" should be the deadline for submission of the section 303(d) lists. Those favoring April 1 believed that having concurrent deadlines for the section 305(b) reports and the section 303(d) lists would reduce duplication of effort on the part of States, Territories, and authorized Tribes. Those favoring October 1 believed that it would be beneficial to have several months after the due date for the section 305(b) report to perform additional analysis needed for completing the section 303(d) report. EPA also received comments recommending against incorporation of approved lists of impaired waters in Water Quality Management Plans. These comments

expressed concern about the volume of information included in these plans.

What is EPA promulgating today? EPA is today promulgating the requirement that States, Territories, and authorized Tribes submit their lists of impaired waters including prioritized schedules by April 1 of every fourth year, starting in 2002.

EPA decided upon a longer listing cycle because of the reduction in reporting burdens, opportunity for more complete data gathering and analysis, and greater likelihood of observing changes in the condition of waters between listings. Concerns about improperly-listed waters later found to be meeting standards remaining on lists for nearly four years have been addressed by clarifying that there is an opportunity for States, Territories, and authorized Tribes to make modifications to their list as provided by § 130.29 discussed above.

EPA believes that the public will receive adequate updates regarding the condition of the nation's waters through the biennial section 305(b) reports that States, Territories, and authorized Tribes must submit according to the CWA. Though EPA recognizes that in the future, some TMDLs may be established a couple years later than would have been the case with a two-year listing cycle because they will be listed every four years rather than every two years, this decision has no impact on TMDLs already listed which must be established on the schedule required by today's rule.

EPA has selected a four-year listing cycle, as opposed to a five-year cycle because it believes that coordination between section 303(d) lists and section 305(b) reports provides significant efficiencies. States, Territories, and authorized Tribes will continue to be able to make use of their section 305(b) reports when they develop their section 303(d) lists. There should still be ample opportunity to coordinate between the section 303(d) listing process and the monitoring and implementation activities performed as part of a five-year watershed/rotating basin strategy. In a five-year watershed or rotating basin strategy, a State, Territory, or authorized Tribe identifies a process of collecting information, assessing the information, determining the watershed-wide loading requirements, and implementing those requirements. At any time during this five-year cycle, a State, Territory, or authorized Tribe can develop a list of impaired waterbodies for its jurisdiction based on the existing and readily available information it has collected. The State, Territory, or authorized Tribe can then develop a schedule for TMDLs that is in synchronization with the anticipated development of watershed-wide requirements in its five-year rotating basin plan. In this way, a State, Territory, or authorized Tribe can continue to address pollution problems in a five-year rotating basin cycle while fulfilling its obligations to develop lists of impaired waterbodies every four years.

After careful consideration of the comments and other relevant factors, EPA has decided that April 1 would be the best deadline for submission of the section 303(d) list. Since today's promulgation provides the opportunity for combining the section 303(d) list and the section 305(b) report, it seems logical to make the deadline for both of these reports fall on the same day of the year. By requiring section 303(d) lists to be submitted every four years, rather than every two years as previously required, EPA intends to provide States, Territories, and authorized Tribes with ample time to analyze data specifically relevant to section 303(d) listing, and therefore, does not believe that having the section 303(d) list due on the same day of the year as the section 305(b) report will pose additional burdens. In addition, this date is the same date as under the pre-existing rules (§ 130.7).

EPA has decided to retain the proposed requirement that States, Territories, and authorized Tribes incorporate the approved lists of impaired waterbodies in the Water Quality Management Plans. EPA recognizes the volume of information that the lists will include. Nevertheless, EPA believes the public needs to be able to find the lists of impaired waterbodies, and the Water Quality Management Plans is a logical place to find this information. A State, Territory, or authorized Tribe can satisfy this requirement by either incorporating the actual list on waters with the other parts of the Water Quality Management Plan, or by incorporating the list by reference. Furthermore, as stated in § 130.51(b), the Water Quality Management Plans are used to direct implementation. By requiring that the approved lists of impaired waterbodies are incorporated into the Water Quality Management Plans, EPA believes this is an efficient connection between the targets for implementation (impaired waters) and the implementation procedures. This is particularly useful for the Part 2 waterbodies where States, Territories, and authorized Tribes will need to incorporate in the Water Quality Management Plan implementation procedures to address pollution not associated with pollutants. Finally, EPA interprets section 303(d) as requiring that States, Territories, and authorized Tribes include the lists into their Water Quality Management Plans.

When a State, Territory, or authorized Tribe submits a list or modification to a list to EPA, EPA will approve it if it meets the applicable requirements. EPA will consider public comment on the list and may modify the list to assure that it complies with the regulations of Part 130. If a State, Territory, or authorized Tribe does not submit a list on time EPA will use its authority to establish the list for the State, Territory, or authorized Tribe. In response to comments, EPA has clarified which sections of subpart C it will use in reviewing the lists, and what actions EPA is obligated to take in its decisions. Therefore, the final rule uses the word "must" to represent EPA's statutory obligations to either approve or disapprove and establish a section 303(d) list of impaired waterbodies, and to establish a list for any State, Territory, or authorized Tribe that does not do so by April 1 of every fourth year.

Finally, EPA includes a statement in today's rule that EPA may establish a list of waterbodies that do not attain and maintain Federal water quality standards. EPA recognizes that there are some impaired waterbodies outside the jurisdiction of States, Territories, and authorized Tribes. Where EPA has established Federal water quality standards for these waters, EPA believes it clearly has the authority to list impaired waterbodies. These waterbodies are generally inside Indian Country where the Tribe is not authorized to implement section 303(d) or in Federal ocean waters.

M. Must TMDLs be Established? (§ 130.31)

What did EPA propose? EPA proposed that TMDLs be established for all waterbody and pollutant combinations listed on Part 1 of the list, but did not propose to require TMDLs for waterbody and pollutant combinations listed on Parts 2, 3, or 4 of the list. In addition, EPA proposed that States, Territories, and authorized Tribes establish TMDLs in accordance with the priority rankings required by proposed § 130.28. Finally, EPA proposed allowing States, Territories and authorized Tribes to establish TMDLs in a different order than provided by the most recently submitted schedule as long as the TMDLs were established in a manner consistent with the overall requirements of proposed § 130.31(a)(1) through (a)(3). EPA explained that it was planning to

consider the extent to which a State, Territory, or authorized Tribe had not or was not likely to meet its schedule for establishing TMDLs when making a decision to step in and establish TMDLs for the State, Territory, or authorized Tribe. (64 FR 46037, August 23, 1999).

What comments did EPA receive? EPA received many comments specific to this section. Some commenters reiterated their concerns about the four-part list. Other commenters pointed to inconsistencies between proposed §§ 130.32(b), 130.32(c), and 130.31(a)(3) and the need for more flexibility to establish TMDLs out of the planned sequence. Some commenters expressed the view that EPA should allow States to use existing programs that achieve the same results as a TMDL instead of requiring a TMDL for all Part 1 waterbodies. Other commenters inquired as to the requirements for "informational TMDLs" under section 303(d)(3).

EPA also received many comments regarding the issues of pollutants which might not be suitable for TMDL calculations. A number of commenters put forth the position that TMDLs were appropriate for all situations, and that EPA should not allow exemptions for technically complex impairments under any circumstances. EPA received a number of comments suggesting that the establishment of TMDLs for certain impairments resulting from atmospheric deposition (*e.g.* mercury and nitrogen) was not feasible because of a lack of appropriate technical tools (*e.g.* data, models), and therefore, EPA should exempt these waterbodies from the list. Similarly, several commenters stated that TMDLs for extremely difficult to solve problems (*e.g.* contaminated sediments) should also be exempt from TMDL establishment, or at least deferred until such time that the tools and data were available. Other commenters expressed a position that EPA had failed to meet its statutory duty under 304(a)(2)(D) to provide guidance on how to determine for which pollutants technical conditions exist to establish a TMDL. Therefore, these commenters felt that the States, Territories and authorized Tribes should be given maximum deference to make this determination for themselves, especially for toxics. A number of commenters suggested that a new part 5 of the list be established to accommodate impairments where the technical conditions were such that TMDLs could not be established until advances in data and models were made. A number of comments suggested that EPA should include the statutory language that recognizes that some pollutants may not be suitable for TMDL calculations. Some comments made specific recommendations that EPA should now determine that flow, biological criteria, temperature, sediment, any interpretation of narrative criteria, whole effluent toxicity, sediment toxicity, legacy pollutants, any pollutant originating from nonpoint sources or atmospheric deposition, mercury, and any pollutant found in an ephemeral stream are not suitable for TMDL calculation. A few comments suggested that TMDLs should be required for stream flow for legal and policy reasons.

What is EPA promulgating today? Based on its analysis of the many comments received on this section, EPA has made four changes to the proposed rule language. First, EPA is requiring in final § 130.31(a) that States, Territories, and authorized Tribes submit the TMDLs they establish to EPA. EPA made this change because although § 130.35 of the proposed rule addressed EPA's review of TMDLs submitted by States, Territories, and authorized Tribes, the proposed rule did not include a specific requirement that States, Territories, and authorized Tribes submit their established TMDLs to EPA.

Second, the final rule separates the requirement that States, Territories, and authorized Tribes establish TMDLs for waterbodies on Part 1 of the list from the statement that TMDLs are not required for waterbodies on Parts 2, 3, or 4. EPA believes this provides additional clarity as to which waterbodies require TMDLs.

Third, EPA is not promulgating the proposed requirement that States, Territories, and authorized Tribes establish TMDLs in accordance with their priority rankings. Instead EPA is requiring that States establish TMDLs in accordance with their approved schedule. EPA has changed the focus in the final rule from the priority ranking to the approved schedule because it has decided to equate a State's prioritization scheme with its schedule for establishing TMDLs for all waterbodies on Part 1 of the list. This is a reasonable interpretation and integration of sections 303(d)(1)(A) and 303(d)(1)(C). EPA believes it would be unreasonable for a State's TMDL schedule to differ significantly from its prioritization of waterbodies under section 303(d)(1)(A) and therefore believes its modification of the proposal in the final rule to require that TMDLs be established in accordance with a State's approved schedule is a logical outgrowth of the proposal.

Fourth, EPA is not promulgating the proposed allowance for States, Territories, and authorized Tribes to establish TMDLs in a different sequence than in their schedule. However, EPA recognizes that States, Territories, and authorized Tribes need the flexibility to adjust the order in which they establish TMDLs if newer information causes a lower priority TMDL to become of higher priority before the time of the next section 303(d) list submittal. The structure of § 130.28(c) provides States, Territories, and authorized Tribes with the flexibility to shift work within each twelve-month block of the schedule without seeking EPA approval. EPA believes that the public should have the opportunity to participate in decisions regarding more significant changes in the sequence by which TMDLs are established. Therefore, EPA expects that States, Territories, and authorized Tribes will use the provisions of § 130.29, which includes public participation, to make modifications to their schedules for TMDL establishment beyond those described above.

EPA does not agree as suggested by comments that it should allow States, Territories, and authorized Tribes to use other existing programs in lieu of establishing a TMDL for impaired waterbodies. The requirements of the CWA are very clear that TMDLs are required for all waterbodies impaired by a pollutant(s) where the technology-based requirements of the Act cannot ensure attainment of water quality standards. EPA recognizes that there are many Federal and State programs and mechanisms available to address impaired waterbodies, and EPA encourages States, Territories, authorized Tribes, and citizens to use them. However, EPA does not believe it can ignore the clear requirement of section 303(d) of the CWA that States, Territories, and authorized Tribes identify impaired waters on a section 303(d) list and develop TMDLs for these waters. To the extent that States, Territories, and authorized Tribes use other programs and mechanisms to achieve water quality standards prior to the establishment of a TMDL, those mechanisms can provide a basis for the State, Territory, or authorized Tribe to remove a waterbody from the section 303(d) list. Also, EPA anticipates that States, Territories, and authorized Tribes will rely on their various existing water quality-related programs and authorities as a means to implement TMDLs.

EPA acknowledges the comments on specific situations for which EPA should determine in this rulemaking that certain pollutants are not suitable

for TMDL calculation. EPA acknowledges that the CWA only requires TMDLs for those pollutants that EPA has determined are suitable for calculation of TMDLs. EPA made the determination on December 28, 1978 (43 FR 60662) that all pollutants were suitable for TMDL calculation under the proper technical conditions. This 1978 finding is not part of today's rulemaking and although neither the determination nor this rulemaking foreclose any reconsideration at a later date for a specific pollutant, EPA is not making any changes to the determination in these regulations. EPA notes that this determination applies only to pollutants and not to all parameters used by EPA, States, Territories, or authorized Tribes to measure environmental health.

EPA rejects a suggestion that TMDLs are unsuitable for calculation when either (1) suitable data cannot be collected to accurately quantify levels of the pollutant of concern, or (2) the water quality assessment methodology for that pollutant has not developed sufficiently to enable defensible determinations of wasteload allocations and load allocations that are likely to eliminate the impairment. EPA believes that the first condition is more a matter of resources than a technical limitation for developing TMDLs. Indeed, under this suggestion, all TMDLs would be unsuitable for calculation in the absence of data, and thus there would be no motivation to collect the necessary data. EPA believes the second condition is too subjective a test, and that the best forum for making this decision is during the public review of a TMDL.

For whole effluent toxicity (WET), EPA recognizes that its own guidance states that chronic whole effluent toxicity measurements are not additive while one primary principle for calculating TMDLs is that mass is additive. EPA also previously declined to apply whole effluent toxicity to the TMDL provisions of Part 132. However, EPA does not believe that these previous guidances and statements mean that whole effluent toxicity is unsuitable for TMDL calculations in all instances. Rather, EPA believes that TMDL calculations for chronic whole effluent toxicity in situations of multiple discharges should be performed on the pollutant(s) causing the toxicity. In these situations, EPA believes the first logical step of analysis is to conduct an ambient toxicity identification evaluation to identify the pollutants causing the toxicity, as suggested by comments. EPA has developed guidance to assist States, Territories, authorized Tribes, and other interested parties in determining the pollutant(s) causing WET. See "Toxicity Identification Evaluations: Characterization of Chronically Toxic Effluents, Phase I," EPA/600/6–91–005F, 1992; "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity," EPA/600/R–92–080, 1993; "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity," EPA/600/R–92–081, 1993; "Marine Toxicity Identification Evaluation (TIR) Guidance Document, Phase I," EPA/600/R–96/054, 1996.

Where a TMDL is being established for only one source of the chronic whole effluent toxicity endpoint, there is no addition of different loadings involved and the TMDL calculations are identical to NPDES calculations. Where there are multiple sources of the acute whole effluent toxicity endpoint, EPA's guidance considers acute toxicity to be additive. See the "Technical Support Document for Water Quality-Based Toxics Control," EPA/505/2–90–001, 1991, at page 24. In these instances, EPA considers TMDL calculations are suitable because acute whole effluent toxicity exhibits additive characteristics.

EPA considers sediment toxicity to be a property of sediments resulting from the discharge of pollutants from multiple sources that were once in the water column and later settled into the sediments. Like chronic WET from multiple discharges, EPA believes that the TMDL calculations of sediment toxicity should be performed on the pollutants causing the toxicity. In these situations, EPA believes the first logical step of analysis is to conduct an ambient toxicity identification evaluation to identify the pollutants causing the toxicity, as suggested by comments. EPA has developed guidance to assist States, Territories, authorized Tribes, and other interested parties in determining the pollutant(s) causing sediment toxicity. See "Sediment Toxicity Identification Evaluation: Phase I (Characterization), Phase II (Identification), and Phase III (Confirmation) Modifications of Effluent Procedures", EPA/600/6–91/007, EPA, 1991.

In addition, EPA was asked in comments to clarify that TMDLs are suitable for addressing impairments caused by urban wet weather sources. EPA recognizes the additional complexity in collecting data and conducting the analyses for pollutant problems related to these sources, but believes that these issues can be addressed by States, Territories and authorized Tribes by providing more time to establish the TMDL in the schedule.

EPA does not consider flow to be a pollutant, and therefore the final rule does not require TMDLs for flow. However, EPA recognizes that there will be cases where flow or lack thereof will contribute to impairment by a pollutant. In some cases the requirement that States, Territories and authorized Tribes consider seasonal variations including flow when establishing TMDLs will result in States, Territories and authorized Tribes having to consider the effect of low and high flow on water quality. In addition anthropogenic changes may contribute to the presence of a pollutant. For example, flow withdrawals or diversions may remove water that once diluted pollutants in the stream or cause the in-stream temperature to rise. Another example is high flow which degrades the aquatic habitat through excessive sedimentation. In these instances, the final rule requires the State, Territory, or authorized Tribe to develop a TMDL for the pollutant (including heat) which is causing the water to exceed the water quality standards. The State, Territory, or authorized Tribe will have to identify in the implementation plan the approach it intends to use to bring the waterbody into compliance with water quality standards. When implementing a TMDL, the State, Territory, or authorized Tribe may find it necessary to address the non-discharge causes of elevated pollutants, including low flow. In these instances, the TMDL allocations will directly address the excessive loading of the pollutant and the implementation plan will indirectly address the pollution problems.

EPA recognizes that the proposal did not include the current regulatory requirements at § 130.7(e) which codify the statutory provisions of section 303(d)(3), which addresses "informational TMDLs." This section of the Act provides that States can at their discretion, establish TMDLs for waterbodies which are not impaired. These "informational TMDLs" which contain the load necessary to attain water quality standards with seasonal variations and a margin of safety are not subject to EPA review and approval and EPA does not believe regulatory language is needed to address them.

N. What is a TMDL? (§ 130.32(a))

What did EPA propose? EPA proposed new § 130.33(a), renumbered § 130.32(a) in today's final rule, to mirror the proposed definition of a TMDL, and to recognize that TMDLs provide the opportunity for comparing

relative contributions of pollutants from all sources and considering economic and technical trade-offs between point and nonpoint sources.

What comments did EPA receive? EPA received numerous comments on this subsection. Many echoed comments submitted on the definition of a TMDL. Some recommended that this section restate in the same words the definition of a TMDL. EPA received a number of comments concerning the ability of TMDLs to accommodate trade-offs between point and nonpoint sources. Many of these comments addressed the general topic of watershed-based effluent trading (as distinguished from comments specific to the offset provision set forth in the proposed NPDES companion rule). The majority of these comments supported the concept of "trading" in general, though most did not specify which of the numerous models of water pollutant trading they specifically endorsed. Reasons given for supporting the concept of trading included: (1) Ability to achieve water quality goals in the most cost-effective manner; (2) potential for achieving water quality goals sooner than otherwise would be the case; and (3) ability to go beyond (do better than) stated water quality goals/standards. Several comments called upon EPA to include language in the rule itself making it clear that "trading" was allowed as a component of a TMDL implementation plan.

On the other hand, some comments, though expressing support for the broad concept of "trading," urged EPA to proceed carefully with approval of individual trading programs, citing concerns about loss of accountability for point sources and reductions in opportunities for public participation in decisions regarding pollutant discharges from individual point sources.

EPA received many other comments regarding how loads are allocated between sources. Some comments suggested that EPA require that States, Territories, and authorized Tribes conduct specified analyses related to allocations. Other comments suggested that EPA require that allocations credit sources with pollutant reductions already achieved or require reductions in proportion to the existing loadings. Further comments suggested that all sources of loads must fairly share in load reductions, regardless of their size or relative contribution. In contrast, some comments stated that EPA has no authority to specify any allocation methodology or conditions, and that the allocation process is solely the authority of the State, Territory, or authorized Tribe. EPA received suggestions that EPA provide more examples of allocation methods in guidance.

Finally, a number of commenters have said that EPA should not have said that TMDLs should be set at levels that will "attain and maintain" water quality standards, and that in the final rule, EPA should not couple the two words.

What is EPA promulgating today? EPA is promulgating this subsection with revisions to make the first and second sentence match the first and second sentences in the definition of a TMDL. These revisions are described in today's preamble in the discussion of the TMDL definition.

Though EPA continues to support efforts by States, Territories, and authorized Tribes, as well as various stakeholders, to identify the most cost-effective means of achieving water quality standards through development and implementation of TMDLs, EPA does not believe it is necessary to provide specific regulatory language specifying how trading should occur. EPA has articulated its support for the trading concept in an "Effluent Trading in Watersheds Policy Statement," January 1996, and a "Draft Framework for Watershed-Based Trading," May 1996, and provided funding and technical support for a number of individual watershed trading projects, and continues to interact with those developing and implementing such projects.

EPA's position has been, and continues to be, that States, Territories, and authorized Tribes may employ in TMDLs any kind of system or policy for allocating pollutant loadings among sources, as long as the resulting allocations will lead to attainment and maintenance of water quality standards. Among the permissible allocation options are ones by which a source of pollutants would provide compensation to another source, in exchange for which the second source would accept a lower allocation, thereby offsetting a higher allocation for the first source. EPA encourages States, Territories and authorized Tribes to bring together stakeholders potentially affected by and interested in a planned TMDL to work together to explore ways in which a variety of allocation arrangements can be considered in selecting a scheme for a TMDL and reflected in the TMDL implementation plan.

EPA also declines to require that States, Territories or authorized Tribes conduct any specific prescribed analyses as part of their decision to allocate loads to point and nonpoint sources. Similarly, EPA declines to require that allocations credit sources with pollutant reductions already achieved, require reductions in proportion to the existing loadings, consider the ability to pay or treatment capacity or where reductions are the easiest to achieve, or require that all sources of loads must fairly share in load reductions, regardless of their size or relative contribution. EPA believes that the decision on how to identify the most cost-effective or equitable means of allocating loadings is best handled by the State, Territory, or authorized Tribe, when the State, Territory, or authorized Tribe establishes the TMDL. Therefore, EPA is not prescribing certain allocation methodologies for States, Territories, or authorized Tribes in this rule. Today's final rule requires that the wasteload and load allocations, when implemented together, will result in the attainment and maintenance of the water quality standard(s) applicable to the pollutant for which the TMDL is being established. EPA's review of the allocations will focus on whether they attain and maintain the water quality standards.

EPA believes the allocation methodology should create a technically feasible and reasonably fair division of the allowable load among sources. Understanding the relationship between pollutant loads and the condition of the waterbody is the basis for evaluating alternative allocation strategies. If there is a range of allocation strategies that could be implemented, EPA encourages the State, Territory, or authorized Tribe to consider various allocation options. This allows for a more rigorous evaluation and decision making process by the stakeholders and regulators. Ideally, States, Territories and authorized Tribes could bring together stakeholders potentially affected by and interested in a TMDL to work together to reach consensus on allocations that are believed by the stakeholders to be effective and equitable.

Pollutant reductions can be allocated among sources in numerous ways (see "Technical Support Document for Water Quality-based Toxics Control," EPA/505/2–90–001, 1991, Chapter 4.) States, Territories, and authorized Tribes may consider several factors, including technical and programmatic feasibility to reduce specific loads, cost-effectiveness, relative or proportional source contributions, ability of small entities to pay for pollutant load reductions, equity based on previous commitments to load reductions, and the likelihood of implementation, to develop the most effective allocation strategy. EPA encourages States, Territories, and authorized Tribes to consider these factors when they allocate loads.

When EPA establishes a TMDL, EPA will seek advice from the applicable State, Territory, or authorized Tribe as to which allocation methodology it prefers that EPA use. As a general approach, EPA intends to use the same allocation methodology that the State, Territory, or authorized Tribe uses for TMDLs it establishes. However, if EPA is not able to establish reasonable assurance of implementation of needed pollution control measures, EPA will revise the pollutant reduction allocation as needed. EPA recognizes the benefit of guidance on the merits of various allocation methodologies, and intends to publish this guidance within a year following promulgation of today's rule for use by States, Territories, and authorized Tribes.

EPA believes the phrase "attain and maintain" is consistent with the language in CWA section 303(d)(1)(C) that requires that TMDLs be established at a level necessary to implement water quality standards. EPA interprets the term "implement" to include not just choosing a load necessary to attain the appropriate water quality standard at a given moment in time, *i.e.,* the date the TMDL is established, but also choosing a load that will ensure that the appropriate water quality standard is implemented over time. For that reason, EPA believes it has the authority to use the phrase "attain and maintain" and has modified the proposed rule in a number of places consistent with this belief.

O. What are the Minimum Elements of a TMDL? (§ 130.32(b))

EPA proposed in § 130.33(b), renumbered as § 130.32(b) in today's rule, that a TMDL include ten minimum elements. The final rule, for reasons explained later, includes eleven elements. Ten of these are discussed in this section. The issues raised by commenters regarding the eleventh element, *i.e.,* the implementation plan, and changes resulting from these comments are discussed in Section II.P. of this preamble. EPA is promulgating its proposal that TMDLs include all the elements. EPA recognizes that TMDLs for waterbodies with only NPDES-regulated point sources contributing the pollutant impairing the waterbody would not require a load allocation. In this situation, the TMDL could include a load allocation of zero. Similarly, TMDLs for waterbodies with only sources which are not subject to NPDES permits contributing the pollutant impairing the waterbody would not require a wasteload allocation. In this situation, the TMDL could include a wasteload allocation of zero.

1. Waterbody Name and Geographic Location

What did EPA propose? EPA proposed in § 130.33(b)(1) that the TMDL include the information provided on the section 303(d) list regarding the name and geographic location of the waterbody for which the TMDL was established, as well as the name and geographic location of upstream waterbodies which contributed a significant amount of the pollutant for which the TMDL was established.

What comments did EPA receive? EPA received very few comments regarding this proposed requirement. Some commenters were concerned that the requirement to identify upstream sources of pollutants meant that controls would have to be established for these sources.

What is EPA promulgating today? EPA is promulgating this section as proposed but now renumbered as § 130.32(b)(1). The Agency believes that it is important to identify upstream contributors of a pollutant for which a TMDL is being established because, as clarified in today's regulations at § 130.32(b)(4), this pollutant load must be accounted for in the TMDL as background loading. EPA recognizes that, due to limited information, a State Territory, or authorized Tribe may not be able to identify a specific upstream waterbody as being the source of pollutants that flow into the segment of the waterbody for which the TMDL is being established. EPA expects that the State, Territory, or authorized Tribe will only identify specific sources of that pollutant upstream of the segment for which the TMDL is being established to the extent those sources are known.

2. Identification and Quantification of the Pollutant Load, and Deviation From Loads

What did EPA propose? In proposed § 130.33(b)(2), and (3), EPA proposed that States, Territories and authorized Tribes identify the pollutant for which a TMDL was established, quantify the load of the pollutant which may be present in the waterbody and not cause an exceedance of a water quality standard, and identify the difference between that amount and the current loading.

What comments did EPA receive? EPA received few comments on these proposed sections. Commenters mostly requested technical clarifications on how to calculate pollutant loads. Other comments requested that the rule require disclosure of which water quality standards apply to a TMDL, and assurance that background loadings are accounted for in the TMDL.

What is EPA promulgating today? EPA is slightly reorganizing these sections to separate the requirements for identification of the pollutant, now contained in § 130.32(b)(2), from the quantification of the pollutant load necessary to attain water quality standards in § 130.32(b)(3) and the quantification of the deviation between current loading and that necessary to attain and maintain water quality standards in § 130.32(b)(4). EPA believes that this separation better clarifies the elements of the TMDL. This also results in there being 11 elements of the TMDL, because two requirements are reorganized into three requirements.

In addition, as suggested by comments, EPA is adding the requirement to consider pollutant loads from upstream sources as part of the background. EPA recognizes that the TMDL serves as a mechanism for accounting for the total load of a pollutant in a waterbody. In the TMDL, all pollutant loads need to be accounted for to ensure that when the total load is allocated, the sum of the allocations does not exceed the water quality standard. Without identifying loads from upstream sources as background loads, the allocation process is likely to over-allocate loadings to point and nonpoint sources, thus leading to an exceedance of the water quality standard.

EPA does not interpret quantification of loads as always requiring the direct monitoring of sources of pollutant loads or the pollutant load within a waterbody. States, Territories, and authorized Tribes have the flexibility to use any methodology that develops a number that expresses the pollutant load. Direct monitoring is one way, but there are others. For example, States, Territories, and authorized Tribes may use water quality modeling techniques, either empirical or deterministic, to quantify the load. They may use correlation methodologies to relate non-pollutant metrics to pollutant loads. In general, the State, Territory, or authorized Tribe needs to use a procedure by which it can develop a number that characterizes the load.

Also, as suggested by comments, EPA is clarifying that the applicable water quality standard must be identified along with the pollutant for which a TMDL is being established. EPA agrees that the public should have access to this information when they review and comment on a proposed TMDL because the water quality standard is the basis for the TMDL.

3. Source Categories

What did EPA propose? EPA proposed in § 130.33(b)(4) that a TMDL should include an identification of the source of the pollutant with as much precision as feasible, *i.e.,* individual or categorical, in accordance with the definitions of load allocation and wasteload allocations.

What comments did EPA receive? Many commenters repeated either their support or opposition to including nonpoint sources in the TMDL process. Several comments expressed support for identification of all sources, and suggested EPA encourage States, Territories, and authorized Tribes to identify all sources of a pollutant. Others repeated their concerns regarding designation of certain animal feeding operations and silviculture activities as point sources. These comments are addressed elsewhere in today's preamble.

What is EPA promulgating today? EPA is promulgating the proposed language with minor editorial modifications at § 130.32(b)(5) of today's rule. For reasons discussed previously in today's preamble, EPA believes that the requirement to identify and establish TMDLs for waterbodies exists regardless of whether the waterbody is impaired by point sources, nonpoint sources or a combination of both. *Pronsolino* v. *Marcus,* 2000 WL 356305 (N.D. Cal. March 30, 2000.) Therefore, EPA declines to revise the proposed requirement to exclude identification of nonpoint sources that contribute the pollutant causing an impairment.

4. Wasteload Allocation

What did EPA propose? EPA proposed that an individual wasteload allocation be assigned to each point source covered by the NPDES permit program, with two exceptions. First, EPA proposed that one waste load could be allocated to a category or subcategory of sources within a waterbody subject to a general permit under the NPDES program. Similarly, EPA proposed that pollutant loads from permitted facilities that did not need to be reduced in order to achieve water quality standards could be grouped into one category or subcategory, or considered as part of background loads.

EPA also proposed to require States, Territories, and authorized Tribes to provide technical analysis demonstrating that wasteload allocations, when implemented, would result in attainment and maintenance of water quality standards in the waterbody.

What comments did EPA receive? EPA received a wide variety of comments on the provisions in proposed § 130.33 dealing with wasteload allocations. (Other comments regarding the definition of "wasteload allocations" are addressed elsewhere in this preamble.)

The proposal that one wasteload allocation could be developed for all point sources subject to a general NPDES permit drew substantial and widely varied response. Some commenters endorsed this notion, saying it would reduce administrative burdens on States, Territories and authorized Tribes. On the other hand, there were a number of comments objecting to this provision. These commenters questioned the feasibility of estimating the total loading from all point sources covered by a general permit, particularly permits which do not require the sources wishing to be covered to send a Notice of Intent to the NPDES authority.

Commenters also opposed grouping all sources for which no load reduction was required. They questioned how EPA could ensure that dischargers included under a wasteload allocation, or bundled under the allocation to background, did not increase their loadings of the pollutant above levels discharged at the time of TMDL establishment.

A number of comments called upon EPA to require that States, Territories, and authorized Tribes directly notify any pollutant source potentially affected by the allocations in a proposed TMDL that had been published for public review and comment.

What is EPA promulgating today? After consideration of all comments received, EPA is promulgating a provision that is very similar to the one proposed. The one key change is aimed at clarifying that, for waterbodies affected by both nonpoint and point sources of the pollutant of concern, implementation of the wasteload allocation alone is not always expected to result in attainment of water quality standards. Rather, today's rule specifies that States, Territories, and authorized Tribes should submit, along with the wasteload allocation, supporting technical analyses demonstrating that wasteload allocations, when implemented in conjunction with necessary load allocations, will result in the attainment and maintenance of water quality standards in the waterbody.

As with the proposed rule, today's promulgation states that point sources subject to individual NPDES permits must be given individual wasteload allocations, except those that would not need to reduce their loadings. Point sources subject to individual NPDES permits that, according to the terms of the wasteload allocation for the waterbody into which they discharge, would not need to decrease their pollutant loadings, may be included within a single wasteload allocation for a category or subcategory of sources. Individual NPDES permits for point sources included in such categories or subcategories should have effluent limits (or other permit provisions) for the pollutant being addressed in the TMDL, ensuring that the permittee would not increase its discharge of that pollutant beyond the level it was assessed as discharging in calculating the TMDL's wasteload allocation for that category or subcategory of sources. In these instances, the current NPDES permit provides the regulatory control to prevent these sources of pollutants from increasing their pollutant loads.

Today's rule allows for wasteload allocations to be allotted to a category of sources seeking coverage under a general permit, *i.e.,* all sources seeking coverage under a general permit that are located on the waterbody for which the TMDL is established could be covered under one wasteload allocation (§ 130.32(b)(6)). General permits, like individual permits, must include effluent limits or conditions that are consistent with the assumptions and requirements of the wasteload allocation. Today's rule requires that the implementation plan identify the category of point sources subject to the TMDL which are regulated by a general permit and specify the general permit that applies or will apply to the sources (§ 130.32(c)(1)(i)). Today's rule also requires that the implementation plan identify the wasteload allocation that will be the basis for the effluent limitations (which may be in the form of Best Management Practices defined for NPDES at § 122.2) in the NPDES permit "that will be issued, reissued, or revised." *Id.*

Existing NPDES regulations require the permitting authority to develop water quality-based effluent limits that derive from and comply with all applicable water quality standards. These regulations also require that water quality-based effluent limits be consistent with the assumptions and requirements of any available wasteload allocation prepared by the State and approved by EPA pursuant to § 130.7 (see § 122.44(d)(1)(vii)(B)). Therefore, when an existing permit expires, upon reissuance of that permit, the permitting authority will evaluate whether the effluent limitations or conditions within the permit are consistent with the wasteload allocation in an applicable

TMDL. If not, the permitting authority must ensure the reissued permit includes effluent limitations that are consistent with the wasteload allocation. In the case of storm water permits, the effluent limitations may include best management practices that evidence shows are consistent with the wasteload allocation.

Where a State is establishing a TMDL and that State is authorized to administer general permits under the NPDES program, the State has the discretion and flexibility to determine whether to issue separate general or individual permits to implement the wasteload allocation or whether to revise or reissue a general permit to implement the wasteload allocation. A separate general permit would be specific to the waterbody for which the TMDL is established and may include a different set of conditions and requirements that would be designed or tailored to implement the applicable wasteload allocation under the TMDL. A State may also choose to revise the existing general permit to include additional conditions or effluent limitations applicable to those sources or categories of sources, consistent with the wasteload allocation. EPA believes that a new general permit (*e.g.* a storm water general permit) that includes best management practices, rather than numerical limitations on the mass or concentration of pollutants in the discharge, is adequate for the purposes of ensuring implementation of a wasteload allocation.

When a State is establishing a TMDL but that State is not authorized to administer general permits under the NPDES program, the State and EPA would work together to address how the applicable national general permit would be "issued, reissued or revised" to implement the wasteload allocations applicable to the category of sources subject to a TMDL covered by the general permit. EPA would also have the discretion and flexibility to determine whether to issue a separate general permit to implement the wasteload allocation, whether to issue an individual permit, or whether to revise or reissue the general permit to implement the wasteload allocation. This discretion and flexibility would also be available to EPA where the Agency is establishing a TMDL for a State that is not authorized to administer general permits under the NPDES program. In addition, where EPA is establishing a TMDL for a State and that State is authorized to administer general permits under the NPDES program, EPA, in developing the implementation plan, would need to work with the State to determine how the State-issued general permits would be "issued, reissued or revised" to implement the applicable wasteload allocation under the TMDL.

As would have been the case with the proposed rule, when EPA approves a TMDL, it will also be approving the component wasteload allocations and load allocations. EPA's review of wasteload allocations and corresponding load allocations will be aided by the supporting technical analyses demonstrating that implementation of wasteload allocations and load allocations (where applicable) is feasible and will result in attainment of water quality standards. EPA's review will also include a review of the sources of information that the State, Territory, or authorized Tribe cites in support of its technical analysis.

5. Load Allocation

What did EPA propose? The proposed rule required States, Territories, and authorized Tribes to assign individual load allocations to specific nonpoint sources (including air deposition and natural background) unless doing so would be impossible. In cases where it was not possible to assign individual load allocations, specific nonpoint sources could be grouped together into categories or subcategories. Each category or subcategory would be given a load allocation. In addition, where load reductions are not needed from certain sources, the load allocation for those sources could be grouped into one aggregate load allocation.

The proposal also required States, Territories, and authorized Tribes to provide technical analysis demonstrating that load allocations, when implemented, would result in attainment and maintenance of water quality standards.

What comments did EPA receive? EPA received a large number of comments with regard to load allocations, covering a range of issues. A number of these comments are also relevant to the proposed definition of "load allocation" at § 130.2(f), and are summarized in the discussion of that provision.

The proposal to allow States, Territories, and authorized Tribes to aggregate a number of individual nonpoint sources into a category or subcategory for which just one wasteload allocation would be required, received both favorable and unfavorable comments. Several commenters specifically objected to the language requiring States, Territories, and authorized Tribes to calculate individual load allocations for specific nonpoint sources if doing so were "possible" and encouraged EPA to use the word "feasible" or "practical" instead.

The issue of possible inequities in the allocation of allowable loads among sources of the pollutant for which a TMDL was being developed was the subject of a significant number of comments. A number of commenters expressed the fear that because of a lack of Federal regulatory authority (and often, State authority as well), States, Territories, and authorized Tribes would likely give relatively generous allocations to nonpoint sources, thereby requiring disproportionately large reductions by point sources. Some of those expressing this concern urged EPA to require that allocations of loadings be done "proportional to current loadings" from various sources. On the other hand, some called upon EPA and States, Territories, and authorized Tribes to take "achievability and assurance" of loadings reductions into account when doing allocations of loadings and indicated this meant that greater responsibility for loadings reductions would be assigned to sources either subject to enforcement or very likely to actually achieve reductions for other reasons.

What is EPA promulgating today? The provision of § 130.32 addressing load allocations that is being promulgated today is very similar to the proposed rule. A few changes have been made in response to comments. First, the provision was revised to be consistent with revisions to the definition of "load allocation" that were previously discussed in today's preamble. Second, based on comments, the condition to trigger developing separate load allocations was changed from "possible" to "feasible." EPA believes that a feasibility standard is better for making this decision. Developing a separate load allocation for a source may be possible but not feasible. In some instances, the loadings from nonpoint sources can only be feasiblely quantified on an aggregate basis. EPA does not intend States, Territories, or authorized Tribes to expend additional effort to develop separate load allocations if not feasible, and thus has made this change to the final rule.

6. Margin of Safety

What did EPA propose? EPA proposed in § 130.33(b)(7) to specify how States, Territories and authorized Tribes could satisfy the statutory requirement that TMDLs include a margin of safety. EPA proposed that the requirement could be satisfied either by expressing the margin of safety as

unallocated assimilative capacity, *i.e.,* demonstrating that the pollutant loading would be less than the assimilative capacity of the waterbody, or demonstrating that conservative assumptions had been built into the calculations of the wasteload and load allocations.

What comments did EPA receive? EPA received many comments asking for specific criteria to calculate the margin of safety while others suggested that EPA should keep this requirement as flexible as possible. Some commenters pointed out that water quality standards already account for scientific uncertainties. Some commenters suggested that the margin of safety should increase as uncertainties in the quality of the data used to establish the load and wasteload allocations increase.

What is EPA promulgating today? EPA believes that the margin of safety required by the section 303(d)(1)(C) for establishment of TMDLs allows for consideration of more factors than the scientific uncertainty included in the development of water quality standards and must also account for analytical uncertainties associated with all the calculations required to establish a TMDL. Nothing in the statute indicates that these factors are exclusive to all others in interpreting what margin of safety means. EPA has clarified this requirement at § 130.32(b)(8) in the final rule by explicitly stating that the margin of safety must appropriately account for uncertainty, including those associated with pollutant loads, water quality modeling, and monitoring. EPA has also clarified how the margin of safety could be expressed. EPA agrees with the commenters that the calculation of margin of safety is complex and that guidance addressing a variety of situations, including reliability of the data need to be developed. EPA is planning to issue such guidance soon after this rule is promulgated.

EPA does not believe that the margin of safety is addressed by how the water quality standards account for scientific uncertainties. CWA section 303(d) requires that TMDLs implement the applicable water quality standard. EPA interprets the margin of safety requirement of the CWA to address the relationship of the TMDL to the water quality standard, and not how the standard itself addresses uncertainties.

7. Consideration of Seasonal Variations

What did EPA propose? EPA proposed in § 130.33(b)(8) to codify the statutory requirement that TMDLs must account for seasonal variations and to require States, Territories and authorized Tribes to also consider other environmental factors which could affect the water quality impact of the pollutant for which a TMDL was established.

What comments did EPA receive? EPA received considerable support for this requirement. Many commenters pointed out that the amount of flow in a waterbody could have significant impact on the level of a pollutant and that EPA should require TMDLs to account for low flow as well as wet weather flow and storm water events. Other commenters however, construed this proposed requirement as an interference with States' water rights and allocation processes. Finally, many commenters did not agree that water quality standards must be attained in all seasons or during unusual events such as major storms.

What is EPA promulgating today? EPA is promulgating this requirement at § 130.32(b)(9) with a few changes. EPA agrees with the commenters that the level of flow in a waterbody can affect whether or not a waterbody attains and maintains water quality standards; therefore, EPA is specifically requiring that flow levels be taken into consideration as part of seasonal variations. By including this language, EPA is not intending that States, Territories or authorized Tribes make changes to established water allocations or water rights. Instead, EPA intends for the pollutant load allocation to take into account the impact of flows on the water quality of the impaired waterbody. EPA also believes that TMDLs must be established so that water quality standards are attained and maintained in all seasons and all flows. This includes consideration of storm conditions where storms or storm water runoff contribute the pollutants causing the impairment to the waterbody. EPA believes that this is the very reason consideration of seasonal variations is included in the statutory language, and EPA is adding language in the final rule to clarify this point. EPA's intent is that TMDLs must account for normal variations in seasonal conditions for environmental factors such as flow, precipitation or temperature, and not necessarily account for extreme unusual conditions such as 100-year storms or hurricanes.

States, Territories, and authorized Tribes can address seasonal variations in many different ways. One way is to use water quality modeling techniques, such as continuous or dynamic modeling, that directly consider variations in environmental conditions. Another way is to conservatively identify a suite of environmental conditions that represent the worse conditions experienced in the waterbody, and thus lead to identifying a load that is protective of all conditions. Yet another way is to establish TMDLs for each season or month that are representative of the environmental conditions in those seasons or months. Because there are different ways of addressing seasonal variations in environmental conditions such that water quality standards are met as required, EPA believes that it is more appropriate to address the details of this analysis in guidance rather than in today's rule.

8. Allowance for Increases in Pollutant Loads

What did EPA propose? EPA proposed at § 130.33(b)(9) that TMDLs include an allowance for future growth to account for reasonably foreseeable increases in pollutant loads. EPA included this provision to meet the statutory mandate that water quality standards must be attained and maintained. EPA believed that, absent such an allowance, it would be difficult to demonstrate maintenance of the standards. EPA explained in the preamble that it intended for the allowance to be based on existing and readily available data at the time the TMDL was established.

What comments did EPA receive? Many commenters pointed out that decisions about future growth were the province of local governments. They opposed the proposed language because they construed it as a requirement to control growth. Others were concerned that allowance for future growth would render TMDLs more stringent than necessary and unfairly place a burden on current dischargers.

What is EPA promulgating today? EPA is promulgating this requirement at § 130.32(b)(10) but is modifying the proposed language to clarify that the intent of this provision is not to control growth but to ensure that TMDLs take into account potential increases in loadings regardless of their cause. EPA believes accounting for any such potential increases is a necessary step in setting loads at a level necessary to implement standards and accordingly is authorized by § 303(d)(1)(c). If a State, Territory, or authorized Tribe does not anticipate increased loadings in a TMDL, it may satisfy this element by indicating it does not expect there to be such increases and providing a brief explanation why. Moreover, if the State, Territory, or authorized Tribe does not anticipate future increased loadings, it may find itself needing quickly to revise the TMDL to accommodate new

discharges. On the other hand, if a State, Territory, or authorized Tribe includes an allocation for increases in pollutant loads, then any new loading or increase in pollutant loading that occurs will be addressed by that allocation without requiring that the TMDL be revised. EPA does not intend that, if a State, Territory, or authorized Tribe decides to specifically provide an allocation for increased pollutant loadings in a TMDL, it needs to identify the types of facilities or activities that would receive that allocation. Instead, EPA expects that the allowance for increased pollutant loadings would be an aggregate amount that could be applied to any future increase in loads. The specific decisions as to how to allocate that aggregate allowance for increased loads to new facilities or activities are best made by the State, Territory, and authorized Tribe along with local governments.

P. What Are the Requirements of the Implementation Plan (§ 130.32(c))?

What did EPA propose? EPA proposed that each TMDL include, as a minimum element required for approval, an implementation plan. The implementation plan as proposed contained eight minimum elements: (1) Intended control actions; (2) a time line; (3) reasonable assurance that wasteload and load allocations will be achieved; (4) legal authority; (5) time required to attain water quality standards; (6) monitoring plan; (7) milestones for attaining water quality standards; and (8) TMDL revision procedures. The proposal would have required States, Territories and authorized Tribes to submit implementation plans to show how each TMDL was to be implemented. The proposal recognized that it would be more effective and supportive of watershed approaches to have implementation plans that show how all TMDLs for a particular pollutant or a number of pollutants in particular basins, would be implemented. EPA specified that it would not approve a TMDL without an adequate implementation plan. The proposal linked the adequacy of the implementation plan to a determination by EPA that there was reasonable assurance that implementation would occur. If EPA could not approve the TMDL, EPA would have to establish the TMDL which would include an implementation plan and provide reasonable assurance.

What comments did EPA receive? EPA received numerous comments on the proposed implementation plan requirement. A few commenters supported the requirement as proposed. Many commenters opposed the requirement altogether. Among commenters who supported the requirement many questioned EPA's authority to require implementation plans as mandatory parts of TMDLs under the authority of section 303(d). These commenters suggested that EPA should continue to require implementation plans as part of a State's water quality management plan even if it meant promulgating amendments to the regulations at § 130.51 to make the plans enforceable. Some commenters opposed implementation plans because they believe they would considerably slow establishment of TMDLs. Others expressed concerns that the proposal was too inflexible and would lead to federal regulations of non point sources. Some commenters argued that separating the implementation plan from TMDL establishment would lead to more scientifically defensible TMDLs and that approved TMDLs would provide a clear goal and the impetus for better interaction between stakeholders in designing implementation plans. Some commenters supported the requirement for implementation plans but raised questions concerning the specific proposed elements of the implementation plan requirement, especially in regard to nonpoint sources.

What is EPA promulgating today? Today's rule at § 130.32(c) retains the requirement for implementation plans as required elements of TMDLs. As discussed in the August 23, 1999 preamble (64 FR 46032–46035), EPA believes that it has the authority to require implementation plans because section 303(d) requires that TMDLs be established at a level necessary to implement water quality standards. Today's rule establishes that one way EPA can determine whether a TMDL is approved at a level necessary to implement applicable water quality standards is to require an implementation plan. In addition, EPA believes that implementation plans provide the basis for demonstrating that water quality standards will be attained and maintained through pollution controls other than controls over point source discharges subject to an NPDES permit.

EPA believes that implementation of TMDLs is the most important aspect of today's rule. Without implementation, TMDLs are merely paper plans to attain water quality standards. The implementation plan requirement assures that the Nations' remaining water quality problems will actually be addressed by appropriate actions identified in the implementation plans submitted as part of the TMDLs.

Today's rule acknowledges that implementation plans will differ depending upon the type of sources causing the impairments in a particular waterbody. Therefore the final rule makes it clear that the purpose of the implementation plan is to describe, at a level of detail appropriate to the circumstances, actions necessary to implement the TMDL. Implementation plans are not meant to be lengthy or complex. They must however contain sufficient detail so that EPA and the public can determine whether the actions proposed in the plan can actually eliminate the impairment and whether there is reasonable assurance that they will occur and when.

The requirements of the implementation plan are now identified separately for waterbodies impaired (1) only by point sources required to have an NPDES permit, (2) only by sources other than those required to have an NPDES permit including nonpoint sources, or (3) by a combination of both point sources required to have an NPDES permit and other sources including nonpoint sources. Although the requirements are identified separately, they provide common information on what sources will be expected to reduce loadings, how these reductions will be accomplished, when these reductions will occur, and how the results will be measured.

Some elements of implementation plans are common to all sources: A schedule for implementation actions, the date by which the implementation plan will attain water quality standards, a modeling and/or monitoring plan and a description of interim, measurable milestones and criteria to be used to determine progress towards attaining water quality standards and when the TMDL needs to be revised. These provisions were included in the proposed rule, and except for one change discussed below, are unchanged in the final rule except for formatting changes.

In the final rule, EPA is making a small revision to the proposed language regarding the time to attain water quality standards. The proposal would have required "an estimate" of the time necessary to attain water quality standards. The final rule requires that the implementation plan must include "the date" by which the waterbody will attain water quality standards. EPA believes the phrasing of the final rule is a logical outgrowth of the proposal and a clearer description of what is intended—the "date" when the State, Territory, or authorized Tribe believes water quality standards will be attained.

Implementation Plans for Point Sources for Which an NPDES Permit is Required

For waterbodies impaired by only point sources subject to an NPDES permit, the implementation plan is expected to rely primarily on the NPDES permit(s) that will be issued, reissued or revised so their effluent limit(s) will be consistent with the wasteload allocations in the TMDL. The plan will identify which facilities are required to have permit limits that are consistent with the wasteload allocation, identify the limits to be incorporated into the permits, and identify the schedule by which the permits will be issued, reissued, or modified. EPA's expectation of when these permits will be issued, and EPA's commitment to ensure the proper and timely issuance of these permits, is described in the preamble discussion about EPA's objection to State-issued expired and administratively continued permits.

Implementation Plans for Sources for Which an NPDES Permit is Not Required

For waterbodies impaired only by sources other than those subject to an NPDES permit, including nonpoint sources, the implementation plans are required to contain several different elements. The plans for these waterbodies must identify the source categories, subcategories or individual sources that are expected to implement load allocations. These implementation plans must also include a description of specific regulatory or voluntary actions, including management measures or controls that State, Territorial, authorized Tribal or local governments and individuals will implement that provide reasonable assurance that load reductions will be achieved, and the schedule by which these measures are expected to be implemented.

EPA recognizes that nonpoint source problems are different from point source problems and that implementation plans for nonpoint sources must reflect the higher natural variability and relative imprecision of nonpoint sources in relation to point sources. EPA expects that implementation of load allocations will depend primarily upon recognized nonpoint source control activities. These actions are often those already undertaken in States, Territories and authorized Tribes to carry out programs and activities approved under CWA section 319, as well as those under the requirements of the Coastal Zone Act Reauthorization Amendments and the cooperative conservation and water quality programs carried out by the United States Department of Agriculture (USDA). These ongoing activities are expected to provide the foundation for nonpoint source implementation plans. EPA expects that nonpoint source implementation activities will rely upon management measures and that implementation plans will reflect performance expectations of these measures over time. In the case of nonpoint source impaired waterbodies, the detail and level of certainty that water quality standards will be attained through these management measures may be different from that for waterbodies impaired only by point sources.

EPA is also clarifying in § 130.32(c)(2)(iii) that implementation plans for other than point sources (primarily nonpoint sources) must include a schedule for implementing management measures or other controls in a TMDL within five years when implementation within that period is practicable. In response to comments, EPA has added a target date of five years for implementation of management measures and other controls where it is practicable to do so. The proposal required that implementation plans include a timeline, including interim milestones, for implementing control actions and/or management measures. The final rule requires this timeline be in the form of a schedule for implementing the control actions and/or management measures as well as a description of the interim milestones for determining whether the management measures and/or control actions are being implemented.

EPA added the five-year target in response to comments that there needed to be some target or goal for implementing the control actions and/or management measures. EPA never intended that implementation of the control actions and/or management measures would be open ended. The proposal included the requirement for milestones for implementation. The five-year target for implementation represents the Agency's expectation that, where practicable, the management measures and/or control actions should be implemented within five years. This is a logical outgrowth of the proposal that the implementation plan include an estimate of the time required to attain and maintain water quality standards and reasonable response to comments received. EPA expects that the public believes that the TMDL will be quickly implemented following its establishment. If implementation requires more than five years, EPA believes that the public is entitled to an explanation as to why five years is not practicable.

The final rule recognizes that the schedule may provide for more than five years. Where a State, Territory, or authorized Tribe determines that five years is not practicable, it must explain the basis for its determination. In determining whether it can implement management measures within five years, the State, Territory, or authorized Tribe may consider, but is not limited to, such factors as technical feasibility of installing controls and measures or changing practices within five years, competing program priorities in providing necessary funding and/or necessary technical assistance, and time to work with members of the affected community. The analysis of practicability in this provision is not intended to add a new requirement beyond the requirement to establish reasonable assurance that management measures and/or control actions will be implemented as expeditiously as practicable. It recognizes that if it is practicable to implement controls and measures within five years, they should be implemented within five years. EPA recognizes that even if controls and measures are implemented within five years, it reasonably would be expected to take additional time for the actions and measures to achieve their intended results and for load allocations to be met.

In general, EPA believes that, barring resource constraints or other impediments that make expeditious implementation impracticable, TMDLs can be implemented within five years of completion of the implementation plan. In the typical situation, the types of management measures that will be used to implementation the TMDL will consist of a set of well-established practices that are commonly practiced within the affected industries and can be implemented within a five-year time frame.

For example, to address soil erosion, well-established practices such as those that were used by USDA to implement the conservation compliance program on highly erodible cropland within the statutorily required five-year implementation period of 1985-1990 would typically be used. To address the impact of grazing upon water quality, typical approaches would include a USDA "conservation management system" or other similar range management plan to reduce cattle's access to the stream (*e.g.*, by providing alternative supplies of water, shade, and salt away from the stream; hardening the limited access points to the stream; and using fencing where necessary), and

to employ effective grazing rotation strategies that will ensure both that upland areas remain both productive and that soil erosion is reduced.

Similarly, the primary practices to be used to implement measures to address silvicultural nonpoint sources include road maintenance practices to reduce runoff and streamside management practices that will assure that sufficient protection is provided to provide adequate shade and erosion control in streamside management zones. For urban runoff, typical measures will include prevention techniques such as erosion and sediment control in new developments (which are required by new NPDES regulations for all developments larger than one acre); continued treatment of post-development runoff through a variety of urban best management practices, protection and restoration of riparian areas; and techniques to treat runoff in developed areas.

These and other nonpoint source measures can generally be implemented within five years from the time that it has been determined through a TMDL implementation plan that they will be needed to achieve water quality standards. EPA recognizes that in some situations, a five-year implementation period may prove to be impracticable. This situation is most likely to arise in some heavily developed areas where existing infrastructure limits the availability of effective technical approaches to very sophisticated and expensive treatment options. For this reason, the rule states that TMDLs should generally be implemented within a five-year period but allows for the State to make appropriate exceptions to the general five-year implementation period to address situations where the implementation plan cannot practicably be implemented within five years.

Implementation Plans for Blended Sources

For waterbodies impaired by both point sources required to have an NPDES permit and other sources, including nonpoint sources, implementation plans are required to include all of the elements applicable to these sources. In addition, implementation plans for waterbodies impaired by both types of sources must include a description of the extent to which wasteload allocations reflect the expected achievement of load allocations. EPA encourages implementation plans that reflect tradeoffs between wasteload and load allocations. A particular wasteload allocation may be set which anticipates that a load allocation will achieve a certain reduction in nonpoint source loadings. As long as the wasteload and load allocations together will achieve the TMDL, the TMDL is approvable. EPA does not expect that load allocations will actually be achieved before a corresponding wasteload allocation is established but the implementation plan must demonstrate the reasonable assurance that the practices will achieve the load reductions.

In the final rule at § 130.32(c)(4), EPA has clarified that implementation plans for all impaired waterbodies must be based on a "goal" of attaining and maintaining the applicable water quality standards "as expeditiously as practicable." EPA believes this new section is a logical outgrowth of its proposal that implementation plans include "an estimate of the time required to attain and maintain water quality standards and discussion of the basis for that estimate."

In response to comments, EPA is providing greater clarity in the final rule by identifying the goal that States, Territories and authorized Tribes should be striving to achieve in their implementation plans, *i.e.,* attaining and maintaining water quality standards as expeditiously as practicable. EPA has not expressed its sense of an appropriate time within which to attain water quality standards in the form of a rigid regulatory requirement. Instead, the goal of attaining water quality standards as expeditiously as practicable mirrors the provision in the reasonable assurance definition that TMDLs be implemented as expeditiously as practicable. The definition of reasonable assurance provides the criteria for determining if the TMDL is being implemented within 10 years whenever practicable. The provision in § 130.32(c)(4) is not intended to establish a test for TMDL approval that is different from the requirement to establish reasonable assurance. Attaining standards as expeditiously as practicable is stated in the rule as a goal whose achievement States should strive for as they develop their implementation plans.

The "practicability" of meeting standards within 10 years may be influenced by a wide variety of factors, such as the degree of water quality impairment, the time required to install controls or change practices, the time for such actions to have in-stream effects on water quality, the costs to implement such actions, and time to work with members of the affected community. EPA recognizes that there is a significant amount of uncertainty regarding how quickly implementation measures, once installed, will be effective in achieving water quality standards. In some cases, particularly water impaired by point sources where implementation will be accomplished through NPDES modifications, water quality standards may be achieved within months or a few years. For waterbodies impaired by nonpoint sources, where implementation involves significant habitat restoration or reforestation, water quality standards may not be met for decades. Accordingly, EPA has selected 10 years as a reasonable point between these extremes. If a State, Territory, or authorized Tribe expects that it will take longer than 10 years to achieve water quality standards it must explain why attainment within 10 years is not practicable.

In reviewing State, Territory, and authorized Tribe implementation plans, and particularly those components whose flexibility is conditioned upon a finding of "reasonableness" or "practicability", EPA is not required to, and does not intend to, engage in a detailed effort at second-guessing the judgment of a State, Territory, or authorized Tribe as to whether these conditions are met. Instead, EPA will review the State's, Territory's, or authorized Tribe's submission to determine whether the State, Territory, and authorized Tribe has provided a demonstration of "reasonableness" or "practicability", where such is required. If so, that will be the end of the inquiry. A State's, Territory's, or authorized Tribe's demonstration need not be extremely detailed to pass scrutiny. For example, it would be sufficient to demonstrate that the five-year implementation schedule requirement of § 130.32(c)(2)(iii) is not practicable by stating that section 319 grant money and other sources of funds to implement the relevant management measures will not be available until year six because the next five years worth of funds are already earmarked for other TMDL implementation.

Q. Total Maximum Daily Thermal Load (§ 130.32(d))

What did EPA propose? EPA proposed § 130.33(c) to restate the existing requirements at § 130.7(c)(2) in plain English format. This subsection requires that States, Territories, and authorized Tribes develop total maximum daily thermal loads (TMDTLs) for thermal discharges from point sources into thermally impaired waterbodies.

What comments did EPA receive? EPA received numerous comments on this subsection. Several comments

suggested that the balanced indigenous population (BIP) of shellfish, fish and wildlife standard should be used for both point and nonpoint sources, instead of just point sources. These commenters expressed the belief that Congress intended section 303(d)(1)(D) to apply to all discharges of heat and not just point sources. Other commenters suggested that this subsection was unnecessary, as these discharges are already regulated through NPDES permits. These commenters expressed a belief that most NPDES facilities discharging heat are already regulated based on a BIP standard, and that a thermal TMDL would not result in any greater reductions in heat discharged into the waterbody. One comment suggested that the subsection should recognize that calculations to determine the total maximum daily heat input should be focused on the waterbodies identified on the section 303(d) list as being impaired by point source thermal discharges.

What is EPA promulgating today? EPA is promulgating § 130.32(d) with three revisions. First, EPA is deleting the phrase "from point sources" because this phrase is redundant. Earlier in today's preamble, EPA explained that its definition of "thermal discharge" is limited to a point source discharge of heat. Thus, the phrase "from point sources" that modifies the phrase "thermal discharges" in § 130.32(d) is redundant. Second, EPA made the revision suggested by comments to clarify that the TMDTL calculations apply to waterbodies that are listed as impaired by thermal discharges. Third, EPA is clarifying that TMDTLs must meet the requirements of § 130.32(b) and (c). EPA recognizes that the proposal was unclear regarding whether the elements of a TMDL also apply to TMDTLs. EPA intended that they do. Moreover, the purpose of § 130.32(d) is to explain that TMDTLs are designed to achieve a balanced indigenous population of shellfish, fish, and wildlife instead of attaining the water quality criterion for temperature.

EPA declines to apply the BIP standard to TMDLs established for waterbodies impaired only by nonpoint sources of thermal loading. As discussed in the preamble to the proposed rule, EPA believes that section 303(d)(1)(B) and (D) applies the BIP standard only to thermal discharges from point sources. (64 FR 46017, August 23, 1999).

EPA also rejects the suggestions that § 130.32(d) be deleted because thermal discharges are already regulated through NPDES permits. Not all NPDES regulated discharges have permits that contain effluent limits for heat. For some discharges on thermally impaired waterbodies there may, therefore, be a need to develop thermal TMDLs to address for the first time impairments by thermal discharges. EPA recognizes that, where an NPDES regulated facility has obtained a section 316(a) variance from thermal water quality standards, the facility already is required to discharge at a level based on a BIP standard. However, this is no different than the situation where a point source discharging nitrogen is also regulated by an NPDES permit with effluent limitations based on the applicable water quality standard. Section 303(d) requires TMDLs and TMDTLs in both situations.

R. How Must TMDLs Take Into Account Endangered and Threatened Species (§ 130.32(e))

What did EPA propose? EPA proposed to include language at § 130.33(e) to explain that TMDLs must not be likely to jeopardize the continued existence of an endangered or threatened species listed under section 4 of the Endangered Species Act or result in the destruction or adverse modification of its designated critical habitat. In practice, EPA believes it would be highly unlikely TMDL activities could jeopardize listed species, since the TMDL program will result in substantial improvements in water quality, to the benefit of all water-dependent species.

What comments did EPA receive? A number of commenters opposed EPA's proposal. Grounds for these objections include allegations that EPA lacks authority to impose such a requirement, and that EPA is attempting to shift the burden of compliance with the Endangered Species Act away from EPA and to the States.

What is EPA promulgating today? EPA is promulgating this section as proposed. Today's rule provides a framework for the public, States, Territories and authorized Tribes and other Federal agencies to recognize and account for the effects of lists and TMDLs on endangered species.

The CWA provides ample authority for EPA to include this requirement. This requirement is consistent with the goals of restoring and maintaining the biological integrity of the nation's waters and protection of fish, shellfish and wildlife. See CWA section 101(a). Furthermore, the CWA requires that TMDLs be established at a level necessary to implement applicable water quality standards, and that standards consider propagation of fish and wildlife. See CWA sections 303(d)(1)(C) and 303(c)(2)(A). This is adequate authority to include a regulatory requirement designed to protect endangered or threatened species. See *American Iron & Steel Institute* v. *EPA,* 115 F.3d 979, 1003 (D.C. Cir. 1997). Although EPA does intend to require State, Territory, or authorized Tribe TMDL submissions to adhere to this provision, it is not EPA's intent to divest itself of any duty to comply with the ESA. Where the ESA imposes duties upon EPA, the Agency intends to comply with those requirements.

S. How are TMDLs Expressed? (§ 130.33)

What did EPA propose? EPA proposed at § 130.34 specific requirements regarding how TMDLs may be expressed. First, EPA clarified that all TMDLs must contain an expression of the pollutant load or load reduction necessary to assure that the waterbody will attain and maintain water quality standards. This includes aquatic and riparian habitats, and biological, channel, geomorphological, or other appropriate conditions that represent attainment or maintenance of the water quality standard. In these instances, the TMDL will contain the wasteload and load allocations necessary to maintain these conditions.

EPA also proposed that States, Territories, and authorized Tribes may use one of four approaches when expressing a TMDL. First, the TMDL could be expressed as the pollutant load that ensures that the waterbody does not exceed water quality standards. Second, the TMDL could be expressed as the pollutant load reduction that attains or maintains water quality standards. Third, the TMDL could be expressed as the pollutant load or load reduction that attains or maintains aquatic, riparian, biological, channel, or geomorphological measures so that water quality standards are attained and maintained. Fourth, the TMDL could be expressed as the pollutant load or load reduction that results from modifying a characteristic of the waterbody such that water quality standards are attained or maintained. EPA made this proposal to allow States, Territories, and authorized Tribes to express TMDLs in terms that are appropriate to the characteristics of the waterbody and pollutant combination. Finally, EPA proposed that TMDLs may, where appropriate, be expressed in other than daily terms, *e.g.,* weekly, monthly, seasonal, or annual, as needed, to ensure that the TMDL attains and maintains water quality standards. EPA made this proposal because EPA has found through the practice of

establishing TMDLs that for some pollutants and their applicable standards the concept of a "daily" load is simply not a technically appropriate way of expressing a TMDL in a manner necessary to implement water quality standards. In the preamble, EPA provided examples of three situations where a seasonal or average loading was more appropriate than a daily loading. (64 FR 46031, August 23, 1999). EPA believes that allowing flexibility in expressing the TMDL to reflect the environmental realities of the pollutant and waterbody better allows TMDLs to achieve the Congressional goal of establishing TMDLs at a "level necessary to implement the applicable water quality standards."

What comments did EPA receive? EPA received many comments specific to this section. Most comments focused on the legal and technical issues pertaining to expressing TMDLs as other than a daily load. Some comments expressed support for the flexibility to express TMDLs as daily, monthly, seasonal, or annual loads where appropriate, and believed this would allow TMDLs to better address nonpoint sources. Many comments expressed concerns that use of other than daily loads would allow for excessive loadings over short time periods. When averaged with periods of no loading, these short-term loads could cause the water quality standard to be exceeded. A number of comments stated that only daily loads are permissible under the CWA, including for nonpoint source loads. Other comments expressed the view that the need to use any expression other than a daily value is an indication that the pollutant is not suitable for TMDL calculations.

Some comments expressed concern that proposed § 130.34 implied that a TMDL was no longer a quantitative expression of the load necessary to attain water quality standards. Other comments expressed confusion whether the language of § 130.34(b) allowed TMDLs to be expressed as load reductions or not. A number of comments expressed concern that, because TMDLs are now required to be quantitative expressions of loads or load reductions, this removes the current flexibility to express TMDLs as measures of water quality improvement that do not directly express the load reductions. These comments supported retaining the current rule language.

Some comments expressed support for TMDLs addressing riparian and aquatic habitat, and biological, channel, geomorphological, or other appropriate conditions. Other comments expressed doubt that TMDLs could quantify the relationships between pollutant loads and these expressions of water quality standards. Further comments expressed the belief that TMDLs should only address numeric (and not narrative) criteria in water quality standards.

What is EPA promulgating today? Based on its analysis of the many comments received on this section, EPA is making the following changes to the proposed rule language. First, EPA is revising proposed § 130.34(a) to add the word "quantitative" to modify the phrase "expression of the pollutant load." EPA is making this change to respond to the concerns that the TMDL was no longer a quantification of the load necessary to attain water quality standards. As explained in the preambles to both the proposed and final rules, the purpose of the TMDL is to attain and maintain water quality standards, and the purpose of the wasteload and load allocations is to identify the loadings needed to attain and maintain these standards. EPA agrees there should be no confusion as to this requirement, and thus is making this change to the final rule.

Second, EPA is changing the word "represent" to "result in" in proposed § 130.34(a). EPA made this change based on concerns expressed in comments that loadings or loading reductions do not represent water quality standards but rather result in the attaining and maintaining of water quality standards. EPA agrees with the commenters that the words "represent" is imprecise.

Third, EPA is not promulgating the language of proposed § 130.34(b) that recognized that both the pollutant load and load reductions may be expressed as other than a daily value as appropriate to the characteristics of the waterbody and pollutant. This language allowed TMDLs to be expressed as monthly, seasonal, and annual averages as appropriate to the characteristics of the waterbody. EPA has decided not to include this provision in the final rule because EPA is concerned that it could be used to justify some TMDLs that do not in fact attain and maintain water quality standards in all seasons and for all flows. Instead, EPA is retaining a sentence it promulgated in the 1985 rule in the definition of a TMDL that speaks to how a TMDL can be expressed. That sentence says that TMDLs may be expressed "* * * in terms of either mass per time, toxicity, or other appropriate measure." EPA continues to believe that in some situations, it is reasonable to authorize TMDLs that are expressed in other than daily terms. As discussed in the August 1999 preamble, to conclude otherwise could frustrate the Congressional goal of establishing TMDLs at a level necessary to implement the applicable water quality standards. EPA disagrees with the comments asserting that only daily loads are permissible under the CWA. (64 FR 46031, August 23, 1999). The CWA does not define a TMDL. Nor does the Act specify how a TMDL may or should be expressed. Consequently, the Act does not mandate that a TMDL be expressed as a daily load, and does not require EPA to disapprove TMDLs expressed as daily loads. Rather, this matter is left to EPA's discretion because where a statute is silent on a specific issue, EPA's interpretive regulations are entitled to controlling weight. EPA's previous regulations at § 130.2(i) and current regulations at § 130.33(b)(5) expressly provide that a TMDL may be expressed in terms of either mass per time, toxicity, or other appropriate measure. Furthermore, EPA interprets its regulations to permit TMDLs to be expressed in terms other than daily loads as long as compliance with the applicable water quality standard is assured.

EPA acknowledges the concern that use of other than daily loads could allow for excessive loadings over short time periods that, when averaged with periods of no loading, might satisfy the wasteload and load allocations, but would cause the water quality standard to be exceeded. However, EPA continues to believe that there are situations where other than a daily load is appropriate to ensure that water quality standards are attained and maintained. Where other than a daily load is necessary to address relevant factors, such as the variability of nonpoint sources, the averaging period of the water quality standard or the physical size and hydraulic nature of the waterbody, EPA expects that the State, Territory, or authorized Tribe will use the most appropriate expression of the load amenable to those characteristics. To help ensure that this flexibility is appropriately used, EPA, in its review of the TMDL, will look for an explanation by the State, Territory, or authorized Tribe as to the reasons why it is appropriate to express the TMDL in terms other than a daily load. The TMDL documentation will need to show that the resulting allocations are sufficient to eliminate the impairment, addressing all aspects of the water quality standard and the adverse effects of the pollutant in question. For example, the documentation would discuss, where appropriate, the difference between acute short-term impacts during storm flows and long-term effects of the pollutants in the

system over time, or the difference between short-term changes in water column concentrations and the long-term impacts of pollutant concentrations in sediments and biota. If a TMDL for a particular pollutant contained an expression other than a daily load, and the situation indicated that expressing the TMDL as a daily load is a necessity to attain and maintain water quality standards, EPA would disapprove the TMDL as insufficient to attain and maintain water quality standards.

EPA does not interpret the final rule to require that TMDLs always be expressed as the load or load reduction of the pollutant causing the impairment. The final rule at § 130.32(b)(5) preserves the flexibility to express the TMDL as a quantitative expression of a modification to a characteristic of the waterbody that results in a certain load or load reduction. In these situations, the TMDL is required to identify the pollutant load present in the waterbody (§ 130.32(b)(3)) and the deviation from that load necessary to attain and maintain water quality standards (§ 130.32(b)(4)). However, the allocations and implementation plan monitoring measures could be expressed in terms of a surrogate measure of the necessary load reduction. In these situations, the relationship between a surrogate measure and the pollutant load should be clearly described in the TMDL documentation. For example, a TMDL that addresses exceedances of temperature criteria because of a denuded riparian corridor is ultimately expressed in terms of heat units, *e.g.*, BTU or calories per day, over time. However, the environmental measure that might be most appropriate for implementation plan monitoring purposes is temperature (degrees); for implementation plan management measures it might be miles or acres of riparian zone restored. These surrogate measures must correlate to their ability to reflect a reduction of heat load and decrease in water temperature. In this example, the TMDL documentation would calculate the total heat load that achieves either the temperature water quality standard, or a balanced, indigenous population of fish, shellfish and wildlife, whichever standard is applicable for the waterbody. The TMDL would then show how that heat load would be achieved by a quantified increase in forestation (the appropriate surrogate measure) designed to increase shading of the waterbody. In this way, the environmental measures of ambient temperature and riparian characteristics are quantitatively related to the thermal load expressed in the TMDL.

Other comments expressed doubt that TMDLs could quantify the relationships between pollutant loads and expressions of aquatic or riparian habitat health, and biological, channel, geomorphological, or other appropriate conditions in water quality standards. EPA recognizes there are many causes of elevated pollutants in surface waterbodies. Some situations do not involve a discharge of pollutants, but nevertheless affect the amount of a pollutant load in the waterbody. In these instances, the final rule language requires the State, Territory, or authorized Tribe to develop a TMDL for whatever pollutant (including heat) that causes the waterbody to exceed the water quality standard. For example, where the impairment of an aquatic habitat is caused by excessive sediment as a result of landslides or bank erosion, EPA expects that the TMDL would be established for the pollutant sediment. Another example is where an aquatic habitat is stressed by excessive temperature as a result of a denuded riparian habitat. In this instance, EPA expects the TMDL would be established for the pollutant heat. EPA has developed guidance on how to address impairments due to sediment, which was the most frequent cause of impairment mentioned in the States' 1998 section 303(d) lists. See "Protocol for Developing Sediment TMDLs," EPA 841–B–99–004, October 1999.

EPA declines changing the proposal to provide in the final rule that TMDLs need address only impairments of numeric criteria in water quality standards. EPA's long standing policy has been that narrative criteria apply to all designated uses at all flows and are a necessary component of State water quality standards. See section 303(c)(2)(A) of the CWA; and the Water Quality Standards Handbook, EPA–823–B–94–005a, August 1994, page 3–24. Narrative criteria descriptively accomplish what numeric criteria account for quantitatively. Narrative criteria are descriptions of the conditions of the waterbody necessary to attain and maintain its designated use, while numeric criteria are values expressed as levels, concentrations, toxicity units or other measures which quantitatively define the permissible level of protection. Thus, narrative water quality criteria establish the basic foundation for attainment of designated uses while numeric water quality criteria provide a specific quantitative translation of the necessary level of protection. In short, numeric criteria are specific, quantified expressions of the narrative criteria. States, Territories and authorized Tribes adopt translator procedures by which to derive a quantified numeric interpretation of the narrative criterion. Such procedures must be scientifically defensible, and are also subject to EPA review and approval. EPA recognizes that narrative water quality criteria are not expressed as numbers and thus are not directly amenable to TMDL calculations. However, as expressed in EPA guidance, a State, Territory, authorized Tribe, or EPA can quantify narrative criteria for use on regulatory actions. See "Technical Support Document for Water Quality-based Toxics Control," EPA/505/2–90/001, March 1991; § 122.44(d)(1); "Guidance for Water-Quality-based Decisions: The TMDL Process," EPA 440–4–91–001, 1991; § 132 Appendix F Procedure 3 [which speaks to "values" which are that rule's equivalent to quantifications of narrative criteria]. Therefore, EPA continues to believe that TMDLs can be calculated based on narrative criteria where those criteria can be quantified.

CWA section 303 directs States, with oversight by EPA, to adopt water quality standards to protect the public health and welfare, enhance the quality of water and serve the purposes of the CWA. Under section 303, States, Territories, and authorized Tribes are required to develop water quality standards for waters of the United States within the State. Section 303(c) provides that water quality standards shall include the designated use or uses to be made of the water. EPA regulations implementing section 303(c) are published at Part 131. Under these rules, the minimum elements that must be included in a State's water quality standards include use designations for all water bodies in the State, water quality criteria sufficient to protect those use designations, and an antidegradation policy. Section 131.10 requires States and authorized Tribes to adopt appropriate uses to be achieved and protected. In no case can they adopt waste transport or assimilation as a use for any waters. EPA has in the past, and may in the future, promulgate designated uses for State waters where such action is necessary to meet the requirements of the CWA and the implementing federal regulations.

EPA's policy is that, because designated or existing uses of a waterbody are part of the water quality standards, they are also an appropriate basis for determining an impairment of that waterbody. All of the water quality protections established by the CWA follow from the waterbody's use—established, protected and maintained

under the authorities of section 303(c) of the CWA. Thus, designated uses establish the fundamental basis for determining whether the water quality standards of a waterbody are attained.

In certain circumstances it is possible that water quality criteria can be met, and the designated uses still not achieved. For example, factors such as food web structure, the concentration of dissolved organic carbon in the ambient water, and accumulations in the sediment may effect uptake of mercury into fish flesh on a site specific basis. In these circumstances, EPA recommends States, Territories, and authorized Tribes translate the applicable narrative criteria on a site specific basis, or adopt site specific numeric criteria, to protect designated uses. However, ultimately, the final determination of whether the water quality standard is attained is made by determining the attainment of the designated use.

T. What Actions Must EPA Take on TMDLs That are Submitted for Review? (§ 130.34)

What did EPA propose? In proposed § 130.35, EPA included several minor changes to its current regulatory submission and approval requirements for TMDLs to clarify how the approval process would work. The proposal provided that EPA would only approve a TMDL submission that included all required minimum elements. The proposal would have continued the requirements of the current regulations that when EPA establishes a TMDL, it would send it to the State, Territory, or authorized Tribe for incorporation into the water quality management plan. EPA also proposed to continue the requirements of the current regulations that, when EPA establishes a TMDL, it requests public comment on the TMDL for at least 30 days following its establishment. The proposal also would have added new requirements regarding how EPA would provide public notice and revise TMDLs it establishes based on the public comment it receives.

What comments did EPA receive? EPA received comments regarding the criteria it will use to review TMDLs. Some comments suggested that EPA's review should focus only on whether the TMDL included all required elements, and that EPA must approve any TMDL received if it contained all elements. In contrast, other comments suggested that EPA should review the elements for their consistency with the substantive requirements of this subpart, including whether the TMDL is set at a level sufficient to attain and maintain water quality standards. Further comments again expressed belief that the CWA only allows EPA to review the total load calculated for a waterbody and nothing else. (Today's preamble discusses this issue in section II.A.1.e.)

EPA also received comments about the timing of its actions. Many comments requested an automatic approval of TMDLs if EPA does not act to approve or disapprove the TMDLs within 30 days, or fails to send the State, Territory, or authorized Tribe comments on the TMDL. These comments expressed concern that EPA will not be able to take timely action on all TMDLs and that the new rules will make EPA's review take even longer.

EPA also received comments about its process for disapproving and establishing TMDLs. Several comments expressed concern that the proposal did not commit EPA to take action as required by the CWA. These comments suggested that EPA use the word "must" or "shall" where ever the section spoke to statutory obligations. Many comments requested that EPA provide an appeal process, public hearing, or consultation with States, Territories and authorized Tribes on disapproved TMDLs. Other comments requested that EPA explain to States, Territories and authorized Tribes and the public why it disapproved any TMDL. These comments generally expressed concern that EPA might make arbitrary decisions to disapprove TMDLs. Some comments expressed the view that EPA must follow the same public notice process as States, Territories and authorized Tribes when EPA establishes a TMDL.

EPA also received comments about the adoption of TMDLs into water quality management plans. Some comments requested that EPA establish a deadline by which States, Territories, and authorized Tribes must adopt TMDLs into their plans. Other comments expressed a belief that a TMDL is not effective until after a State, Territory, or authorized Tribe adopts it into its water quality management plan.

What is EPA promulgating today? Based on its analysis of the many comments received, EPA has revised this section, now numbered as § 130.34. First, EPA is deleting proposed paragraph § 130.35(a) because it was duplicative of the requirements of proposed paragraph § 130.35(b). Section § 130.35(a) would have required that EPA approve TMDLs that included the elements identified in proposed § 130.33(b), whereas proposed § 130.35(b) would have required that EPA approve TMDLs that met the requirements of proposed §§ 130.32, 130.33, and 130.34, i.e., established in accordance with the schedule, including the elements required by § 130.33(b) and appropriately expressed. EPA agrees with commenters that the review criterion in proposed § 130.35(a) was included within proposed § 130.35(b). Therefore, EPA is not including the language for proposed § 130.35(a) in the final rule.

The final regulations at § 130.34(a) provide that EPA will approve TMDLs if they are established for the appropriate waterbody/pollutant combination as required by § 130.31, include all elements prescribed by § 130.32, and are expressed in accordance with § 130.33. EPA will disapprove any TMDL submitted by a State, Territory, or authorized Tribe that does not include all elements of § 130.32(b) or fulfill the substantive requirements of §§ 130.31, 130.32, and 130.33. EPA will work with States, Territories, and authorized Tribes, including providing comments on TMDLs submitted to it in draft form, to help ensure that the TMDLs that EPA receives are approvable. EPA considers all elements of § 130.32(b) and the substantive requirements of §§ 130.31, 130.32, and 130.33 as necessary for determining whether a TMDL, when implemented, will attain and maintain water quality standards.

EPA declines to provide that TMDLs shall be deemed automatically fully or conditionally approved at the end of the 30-day review period if EPA has not acted. EPA acknowledges commenters' concerns regarding the timeliness of EPA's TMDL approval actions. However, an automatic full or conditional approval of a State's, Territory's or authorized Tribe's TMDL submission upon expiration of the 30-day review period is not consistent with section 303 of the CWA. Section 303(d) requires EPA to approve or disapprove a submitted TMDL. EPA has the responsibility to determine that submitted TMDLs fulfill the requirements of the CWA and these implementing regulations. EPA declines to adopt an approach which would result in automatic approval actions when EPA has not evaluated the sufficiency of the TMDL with respect to the requirements of section 303(d). As previously discussed, EPA expects to share comments and information with States, Territories and authorized Tribes on draft TMDLs submitted to EPA for informal review. EPA believes that such information sharing will help assure approvable TMDLs and will enable EPA to complete its review within the 30-day statutory time frame.

As requested by comments, EPA is clarifying what actions EPA is obligated to take in its decisions. Therefore, the

final rule uses the word "must" to represent EPA's statutory obligations to either approve or disapprove and establish a TMDL. The final rule also uses the word "must" with regards to EPA's public notice requirements when EPA disapproves and establishes a TMDL.

EPA declines to establish in the final rule an appeal or consultation process for States, Territories, and authorized Tribes when EPA disapproves their TMDLs. Because section 303(d) only allows EPA 30 days to establish a replacement TMDL after EPA disapproves one, EPA does not have sufficient time to allow for an appeal or consultation process. Also, the 30-day period for EPA to issue an order establishing a TMDL and the minimum 30-day public comment period on the TMDL allows time during which the State and EPA can consult on the new TMDL. If during that time, the State decided to adopt and EPA approved a TMDL meeting EPA's objectives, EPA would withdraw its TMDL. As previously discussed, EPA expects that sharing information with States, Territories, and authorized Tribes on TMDLs being drafted will help EPA and States, Territories, and authorized Tribes resolve differences over TMDLs before they are submitted.

EPA agrees that it needs to describe in the administrative record of its TMDL disapproval decisions the reasons for the disapproval and make that information available to States, Territories, authorized Tribes, and interested parties. EPA's public notice requirements at Part 25 describe the process by which EPA generally makes information available and receives public comment. As described later in the preamble, EPA patterned the TMDL public notice requirements on its own Part 25 requirements. EPA also declines to establish a deadline by which States, Territories, and authorized Tribes must adopt TMDLs into their water quality management plans. The CWA does not provide for or require such a deadline. EPA does not believe it is necessary to require adoption of TMDLs in the State's, Territory's or authorized Tribe's plan on a specified schedule once EPA approves or establishes it. A TMDL may be used as a basis for NPDES permits and other implementation actions once EPA approves or establishes it and before it is incorporated into the Water Quality Management Plan. States, Territories and authorized Tribes have different legal requirements for revising their Plans to incorporate TMDLs. EPA believes there is no compelling reason to require States, Territories, and authorized Tribes to revise their individual requirements solely to assure incorporation of all TMDLs into Water Quality Management Plans by a certain federally-prescribed date.

EPA is also adding § 130.34(b) and (c) to clarify how EPA will provide reasonable assurance when EPA establishes a TMDL. EPA will use its authority to condition CWA grants to the fullest extent practicable and in a manner consistent with the effective operation of clean water programs. For example, EPA may condition section 319 grants such that the funds can only be used to implement management measures in watersheds where EPA has established a TMDL that includes load reductions for nonpoint sources. Similarly, EPA may condition section 106 grants such that the funds for monitoring can only be used to support the monitoring specified in TMDL implementation plans. EPA may also use its voluntary, incentive-based programs to ensure that management measures are funded and implemented. EPA believes this authority to condition grants will generally be the sole or primary basis by which it will demonstrate reasonable assurance for the implementation of load allocations. EPA will also encourage States, Territories, and authorized Tribes to use their own statutory and regulatory authorities. EPA cannot, however, require States, Territories or authorized Tribes to use their statutory and regulatory authorities.

Where necessary, EPA will make use of its other statutory and regulatory authorities to provide reasonable assurance. EPA recognizes that its CWA regulatory authority is primarily limited to the NPDES permit program for point sources. In some cases, EPA may use authorities under section 504 of the CWA to address an "imminent and substantial endangerment to human health or welfare."

U. How Will EPA Assure That TMDLs Are Established? (§ 130.35)

What did EPA propose? EPA proposed in § 130.36 to codify its authority to establish TMDLs if the State, Territory, or authorized Tribe so requests, or if EPA determines that a State, Territory, or authorized Tribe has not or is not likely to establish TMDLs in accordance with their schedules, or if EPA determines it should establish TMDLs for interstate or boundary waterbodies. EPA made this proposal for a number of reasons. EPA explained that it may be necessary for EPA to establish TMDLs if interstate or international issues and coordination needs require EPA to assume a leadership role. 64 FR 46037, August 23, 1999.

EPA explained in the preamble that it anticipates that a decision to step in and establish TMDLs would be "rare and based on case specific decisions." Finally, EPA explained that it may have to exercise its authority to establish TMDLs where the State, Territory, or authorized Tribe requests this support from EPA. As discussed in the preamble, EPA recognizes that this authority to establish TMDLs absent a prior disapproval is not expressly stated in section 303(d). However, EPA explained that such authority is clearly implied in the CWA, is a reasonable interpretation of the Act, has been required of EPA by the courts, and is necessary to accomplish the purposes of the Act. 64 FR 46037, August 23, 1999.

What comments did EPA receive? EPA received comments about the conditions under which EPA proposed to establish TMDLs. Some comments expressed a belief that EPA must step in when a State, Territory, or authorized Tribe is likely not to or does not establish TMDLs according to its schedule. Others were concerned about the phrase "likely not to" and suggested that EPA establish TMDLs only after a State, Territory, or authorized Tribe fails to do so. Further comments expressed the belief that EPA has no authority to establish TMDLs outside of a disapproval except when a State requests EPA to do so.

EPA received comments about the conditions under which EPA would establish a TMDL for interstate waterbodies. Some comments supported the proposal. Others believed that EPA must establish interstate TMDLs on behalf of the States. Further comments expressed the view that this authority is limited to situations where EPA determines that States, Territories and authorized Tribes are not making progress in establishing TMDLs. More comments expressed the view that this authority is limited to situations where States, Territories and authorized Tribes or interstate commissions ask EPA to establish TMDLs. A few comments rejected EPA's suggested option to require States, Territories and authorized Tribes jointly to develop interstate TMDLs. Others suggested that EPA's role is to coordinate with States, Territories and authorized Tribes on interstate TMDLs and not establish them for States, Territories and authorized Tribes.

What is EPA promulgating today? In § 130.36 of the proposal, EPA proposed to codify its authority to establish TMDLs for waterbodies on Part 1 of a list under certain circumstances,

including if EPA determined that a State, Territory, or authorized Tribe had not or was not likely to establish TMDLs consistent with its schedule. In response to comments and to better ensure that TMDLs will be established, EPA has added a new § 130.35 to the final rule which codifies steps EPA will take to implement its authority under section 303(d) to assure that TMDLs are established for listed waters. In addition to "working with" States, Territories, and authorized Tribes to assure establishment in accordance with approved schedules, EPA will ensure that TMDLs are established for States, Territories, and authorized Tribes if they have not made "substantial progress" in establishing TMDLs in accordance with their "approved schedule." A discussion of what EPA means by "substantial progress" and a more detailed discussion of EPA's schedule for acting if States, Territories, and authorized Tribes fail to demonstrate "substantial progress" appears below.

As requested by comments, EPA is clarifying that it is obligated to ensure that States, Territories, and authorized Tribes establish TMDLs in accordance with their approved schedules. EPA believes the requirements it is placing on itself to act in § 130.35 are both consistent with CWA section 303(d) as it has been interpreted by a number of courts and a logical outgrowth of the proposal. They are a logical outgrowth in that, in the proposal, EPA clearly noticed its intent to exercise its authority under section 303(d) to step in and establish TMDLs when it determines a State was not likely to do so. In the final rule, EPA is simply clarifying and expanding upon that concept and stating under what specific conditions and upon what schedule EPA will do that. EPA's decision to codify the circumstances under which it will ensure that TMDLs are established is also consistent with the decisions of a number of courts which have interpreted CWA section 303(d) as placing upon EPA a duty to establish TMDLs where a State, Territory, or authorized Tribe has failed to do so, or in the words of the courts, where a State has made a "constructive submission" of no TMDLs.

EPA is also identifying two ways by which it will assure that all TMDLs are established as planned for in the schedule for TMDLs. First, EPA must work with the State, Territory, or authorized Tribe in establishing TMDLs. EPA may do this by providing technical or financial assistance consistent with EPA's abilities and resources, or by establishing certain TMDLs upon the request of the State, Territory, or authorized Tribe. Where a State, Territory, or authorized Tribe has not made substantial progress on establishing a TMDL in accordance with its approved schedule, EPA must ensure that the TMDL is established. EPA does not expect to invoke this authority frequently. Based on its experience to date under court-ordered schedules, EPA believes that the States, Territories, and authorized Tribes will be able to establish most of their TMDLs according to the dates in their schedules.

Today's final rule also explains how EPA will determine if a State, Territory, or authorized Tribe has made substantial progress in establishing a TMDL. Under § 130.28(c), States, Territories, and authorized Tribes will specify which TMDLs they intend to establish in each one year period. If a State, Territory, or authorized Tribe has not established the TMDL by the end of the one year period within which the TMDL was scheduled to be established, it has not made "substantial progress" as described in today's rule. At this point, EPA must ensure that the TMDL is established within two years. In a case where EPA develops a TMDL, the Agency expects to publish the TMDL within 2 years. In rare instances, where there is a compelling need for additional time, the Administrator may extend the 2 year period by up to an additional 2 years. The Administrator must publish a description of a decision to provide an extension in the **Federal Register**. If the State, Territory, or authorized Tribe establishes the "missed" TMDL before EPA establishes it pursuant to this section, EPA must review and either approve or disapprove that TMDL pursuant to section 303(d), and if approved at that time its obligation to establish the TMDL expires. EPA will also look at the stage of development of a TMDL in comparison to the schedule in determining if a State, Territory, or authorized Tribe is making substantial progress. Where the State, Territory, or authorized Tribe is close to completing the TMDL at the time called for by the schedule, EPA will interpret this as substantial progress.

As discussed in the August 1999 preamble, EPA has the authority to establish TMDLs even when it has not disapproved a State, Territorial, or authorized Tribal submission. 64 FR 46037–46038, August 23, 1999. EPA recognizes the merit, in some instances, for it to take the lead in establishing TMDLs for interstate and boundary waterbodies and expects to exercise this authority primarily for interstate waterbodies. For this reason, EPA is including in the final rule a provision allowing EPA the discretion to establish TMDLs for interstate or boundary waters. Boundary waters are those rivers, streams and lakes which form part of the boundary between States, Territories and Indian Country. These waters present special problems because, in many instances, the waterbody is governed by two or more potentially differing sets of water quality standards. Similar problems may be present for interstate water which—rather than forming a jurisdictional boundary—flow out of one jurisdiction and into another. In exercising this authority, EPA will encourage States, Territories and authorized Tribes to take the lead in developing TMDLs for such waterbodies because EPA interprets the CWA as giving States, Territories and authorized Tribes the lead responsibility for doing so. EPA also strongly encourages States, Territories and authorized Tribes to work with interstate river basin and other commissions, where appropriate, when establishing TMDLs for interstate or boundary waters. These commissions are uniquely positioned, by virtue of their multi-state membership and technical expertise, to assist EPA and the States in establishing TMDLs for such waters.

EPA anticipates at least two instances in which it might need to exercise its authority to establish interstate and boundary water TMDLs. The first is when the States, Territories and authorized Tribes have not made substantial progress in establishing interstate and boundary water TMDLs according to their schedules. The second is where individual adjacent State schedules are so different with respect to interstate or boundary waters that they may defeat the ability of the States, Territories and authorized Tribes to work together to establish an interstate or boundary water TMDL. EPA believes the final rule language should allow EPA the flexibility to establish TMDLs for interstate and boundary waters under such circumstances. Finally, EPA is not including in the final rule a requirement that States, Territories and authorized Tribes work together jointly to establish TMDLs on interstate waters. Instead, EPA will continue to serve as a facilitator to help States, Territories and authorized Tribes establish interstate TMDLs, and EPA will use its authority when necessary to ensure that interstate TMDLs are established.

EPA is also adding a statement at § 130.35(b)(2) that EPA may establish TMDLs for waterbodies to implement Federal water quality standards. As previously discussed in today's

preamble, EPA recognizes that there are some impaired waterbodies outside the jurisdiction of States, Territories, and authorized Tribes. Where EPA has established Federal water quality standards for these waterbodies, such as waterbodies located on tribal lands where the Tribe has yet to be authorized under section 303, EPA believes it has the authority to also establish TMDLs for the reasons given above.

V. What Public Participation Requirements Apply to the Lists and TMDLs? (§ 130.36)

What did EPA propose? EPA proposed a number of specific requirements for public participation. EPA proposed to require that States, Territories and authorized Tribes provide the public with at least 30 days to review and comment on all aspects of the list, the priority ranking, the schedule for developing TMDLs, and the TMDLs themselves prior to their submission to EPA. EPA also proposed that, at the time States, Territories, and authorized Tribes submit their list, schedule or TMDLs to EPA, they provide EPA with a written summary of any public comments received during the public comment period and their response to such comments. In addition, EPA proposed to require States, Territories, and authorized Tribes to send, at the time of public notice, copies of lists, priority rankings, TMDL schedules and TMDLs to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services), where appropriate (*e.g.*, coastal areas). The proposal also provided that, if requested, EPA would send this information to the Services on behalf of the State, Territory, or authorized Tribe.

As proposed, the rule also encouraged States, Territories, and authorized Tribes to establish processes with both Services to provide for the early identification and resolution of threatened and endangered species issues as they may relate to lists of impaired waterbodies, priority rankings, schedules, and TMDLs. The proposal also would have required States, Territories, and authorized Tribes to consider any comments received from the Services prior to the submission of their lists of impaired or threatened waterbodies, priority rankings, schedules, and TMDLs to EPA. EPA proposed these provisions to help ensure timely input from the wildlife agencies as lists and TMDLs are being developed.

What comments did EPA receive? EPA received a number of comments specific to the public participation process. Most comments supported the inclusion of public participation requirements. Many comments, however, stated that a 30-day period was too short. A number of comments suggested that the public comment period should be 60 days or longer to facilitate better understanding of the complex issues related to lists and TMDLs. Some commenters recommended specific requirements for the purpose of ensuring notice to interested parties and incorporation of their comments on listing and TMDL decisions. Most comments which addressed this issue recommended that EPA pattern the public notice requirement after those for NPDES permits. Specifically, commenters asked that States, Territories and authorized Tribes be required to establish and maintain mailing lists. Other commenters recommended that EPA be subject to the same public participation requirements as proposed for States, Territories, and authorized Tribes. Further comments suggested that any action to remove a waterbody from a section 303(d) list be subject to the same public participation process as the listing of a waterbody. Many comments objected to the detailed requirements governing how States, Territories and authorized Tribes should address comments they receive and the amount of information about those comments, including responses, they should supply to EPA. Commenters also expressed concern that the proposal gave special notice consideration to the Services, and thus seemed to transfer EPA's obligations under the Endangered Species Act to States, Territories, and authorized Tribes.

What is EPA promulgating today? After carefully considering the comments received on the public participation requirements, EPA is today promulgating the requirements as proposed with a few changes. EPA is making conforming changes throughout the section to reflect the fact, as discussed earlier, that the list of impaired waterbodies includes a prioritized schedule for establishing TMDLs.

The final rule maintains the requirement for a minimum 30-day comment period on lists and TMDLs. EPA recognizes that decisions on lists and TMDLs can sometimes benefit from a significant amount of technical information and analysis related to decisions on lists, rankings, schedules, and TMDLs. States, Territories and authorized Tribes may in such circumstances find a need to allow for longer than 30-day comment periods on lists and TMDLs. However, the rule as proposed and promulgated today specifies 30 days as the minimum comment period. In some instances, particularly where the issues and analyses related to a TMDL are not complex, States, Territories, and authorized Tribes should find that a 30-day comment period is adequate. The final rule, however, gives States, Territories, and authorized Tribes the flexibility to increase their comment periods as appropriate.

EPA is also adding language in the final rule also to encourage States, Territories, and authorized Tribes to notify directly those parties who submit a written request for notification. EPA received a number of comments suggesting that direct notification be a requirement in the same way that authorized State NPDES programs are required to directly notify parties that request such notice. EPA does not believe that establishment of TMDLs is entirely comparable to issuance of an NPDES permit for notice purposes (*e.g.* the number of potentially affected parties may be much larger for a TMDL). EPA however, is including in the final regulation a recommendation that States, Territories and authorized Tribes provide direct notification to parties that request it.

EPA is not including in this section of the final rule public participation requirements for EPA. Today's final rule at § 130.34 includes public participation requirements for EPA regarding disapproval and establishment of TMDLs. In addition, EPA's rules at Part 25 already provide general public participation guidance and requirements for EPA, which include notice to parties that request notice, publication of notice in a newspaper of general circulation, and response to significant comments.

EPA recognizes the importance of public participation on all aspects of section 303(d) decisions, including decisions to remove a waterbody/pollutant combination from the section 303(d) list. EPA has added provisions in the final rule at § 130.29(a) to require that all actions to add or remove waterbodies from the list follow the public participation requirements. In this way, the public is kept informed as to the nature and reasons for any changes to the section 303(d) list.

EPA agrees with the comments which suggested that the proposal was too detailed regarding how States, Territories and authorized Tribes should respond to comments. As suggested by some comments, EPA has reviewed the rules pertaining to NPDES permitting and EPA's rules at Part 25 and has simplified the response to comments requirements for the final rule. The final

rule now requires a response to "all significant comments" instead of "all comments," as proposed. The final rule no longer includes specific requirements as to what is to be included in the response to comments document. EPA believes this change will allow States, Territories, and authorized Tribes the flexibility they need when addressing public comments. EPA's public participation rules for rulemaking and permitting at Part 25 require EPA to respond to significant comments and to include at a minimum, a summary of public views, significant comments, criticisms and suggestions, and set forth the Agency's specific responses in terms of modification of the proposed action or an explanation for rejection of proposals made by the public (§ 25.8). EPA is persuaded by the comments that States, Territories and authorized Tribes should not be held to a higher standard than EPA. Pursuant to the final rule, States, Territories and authorized Tribes need only consider significant comments and indicate how they were addressed in the final action or why they were not addressed.

The rule recognizes that the Fish and Wildlife Service and the National Marine Fisheries Service have an interest in a State's, Territory's or authorized Tribe's list and TMDLs. By including the provisions of § 130.36(c), EPA is not giving the Services greater opportunity to receive information or to comment than is afforded anyone else. Nor is EPA attempting to transfer its obligations under the Endangered Species Act to States, Territories or authorized Tribes. The provisions of § 130.36(c)(1) require States, Territories, and authorized Tribes to provide the Services with copies of lists, including prioritized schedules and TMDLs. However, under the public participation requirements of § 130.36(a), any interested party may also request similar access to this information by making a written request to the State for direct notification. EPA is promulgating § 130.36(c)(1) because the Services have expressed to EPA an interest in reviewing section 303(d) lists and TMDLs. In recognition of the potential burdens on the States which such information sharing might impose, EPA agreed it would undertake this information sharing responsibility with the Services if requested by a State, Territory, or authorized Tribe.

The provisions of § 130.36(c)(2) encourage, but do not require, States, Territories, and authorized Tribes to engage the Services in a dialogue related to Endangered Species Act concerns. EPA believes that it can reduce the number of times it may need to disapprove a list or TMDL based on endangered species concerns if the States, Territories, and authorized Tribes communicate with the Services early in the process of developing lists and TMDLs. For this reason, EPA is including in the final rule a recommendation that States, Territories and authorized Tribes establish processes with the Services that will provide for the early identification and resolution of their concerns as they relate to lists and TMDLs. States, Territories and authorized Tribes are not required to establish such a process, but may find it advantageous to do so.

Section 130.36(c)(3) requires States, Territories, and authorized Tribes to consider comments from the Services and EPA in the same way that § 130.36(b) requires States, Territories, and authorized Tribes to provide a response to significant comments and an explanation of how those comments were addressed in the final action or why they were not addressed. Section 130.36(c)(3) does not require States, Territories, and authorized Tribes to agree with or adopt comments or recommendations from EPA and the Services; however, it does require an explanation of how these comments were considered in the final decision. This is the standard set by § 130.36(b) for all comments received by a State, Territory, or authorized Tribe.

The provisions of § 130.36(d) recognize that EPA will consider the comments of the Services when EPA reviews lists and TMDLs. EPA does not believe that this provision provides the Services with any greater access to the decision maker than other commenters. Rather, this provision alerts States, Territories, and authorized Tribes that EPA will consider the comments of the Services and how those comments were addressed.

W. What is the Effect of This Rule on TMDLs Established When the Rule is First Implemented? (§ 130.37)

What did EPA propose? EPA proposed a transitional period for implementing the TMDL requirements of the new rule. Specifically, EPA proposed that it would approve any TMDL submitted to it for review within 12 months of the final rule's effective date if it met either the pre-promulgation requirements in § 130.7 or the post-promulgation requirements in §§ 130.31, 130.32 and 130.33. EPA also proposed that when EPA establishes TMDLs within 12 months of the rule's effective date, EPA would use either the § 130.7 requirements or the new requirements in proposed §§ 130.31, 130.32 and 130.33. EPA proposed this transitional period to give States, Territories, authorized Tribes and EPA the security of knowing they could develop TMDLs prior to promulgation of the new rules without them later being determined inadequate as a result of the adoption of the new rule. In this way, States, Territories, authorized Tribes and EPA would not delay work towards establishing TMDLs until after the final rule was published. Also, EPA requested comment on whether the new TMDL requirements would affect the ability of States, Territories, or authorized Tribes to establish TMDLs on a schedule consistent with consent decree or settlement agreement schedules, and if so, how to address the issue.

What comments did EPA receive? EPA received a number of comments specific to the transitional period and actions EPA should take to facilitate establishing TMDLs in accordance with schedules in consent decrees and settlement agreements. Most comments supported the transitional period and many supported a period longer than 12 months. Some comments requested that some TMDLs be developed under the current requirements for "good cause." Two comments suggested no transitional period, with one suggesting that States, Territories, and authorized Tribes be allowed to submit implementation plans no more than six months after submitting the other parts of the TMDL. EPA also received comments suggesting that EPA must establish TMDLs using either the current or new rules during the transitional period, and that EPA should work to establish TMDLs quickly using the new rules. Finally, EPA received some comments suggesting that all schedules should be revised because of these new regulations.

What is EPA promulgating today? After carefully considering the comments received on the transitional period, EPA is today promulgating a transition period for the new elements of TMDLs lasting 18 months from the date of publication of this rule in the **Federal Register** or nine months from the effective date of this rule, whichever is later. EPA recognizes the concerns voiced in many comments about the challenge of now drafting an implementation plan for a TMDL already nearing completion, and the benefit of including stakeholders in implementation decisions at the beginning of the TMDL development process in order to better integrate the implementation strategies with the allocation of loads. Most States, Territories and authorized Tribes, as

well as State associations, supported a transitional period of up to 18 months. Of the comments suggesting more than 18 months, only one provided a reason, *i.e.,* the average TMDL requires 24 months to complete. EPA does not believe States need to begin implementation plans at the onset of TMDL development. One comment describes the first 18 months of TMDL development to consist of collecting data, developing models, and conducting the analysis. EPA believes that at least the first six months of this work, especially data collection and modeling, can be conducted before approaching stakeholders to start developing the implementation plan. For this reason, EPA is including a transitional period of 18 months in the final rule unless the rule's effective data is delayed, in which case the transition period will be 9 months from the rule's effective date.

EPA rejects the suggestion not to allow a transitional period based on the commenter's belief that implementation plans could be quickly developed, or that States, Territories, and authorized Tribes have had sufficient notice to begin developing these plans in anticipation of the new regulatory requirements. EPA does not believe that the mere fact that implementation plans were part of the proposal would by itself have caused States, Territories, or authorized Tribes reasonably to believe that the final rule would necessarily require submission of an implementation plan with the rest of the TMDL. EPA received many comments, some from States, Territories and authorized Tribes, contesting the legal authority to require States, Territories, and authorized Tribes to submit implementation plans as part of the TMDL. (This issue was discussed previously in today's preamble.) EPA believes these comments illustrate that many States, Territories, and authorized Tribes have waited to see the final rule before beginning to develop these plans.

EPA also rejects the suggestion not to provide a transitional period but rather to defer submittal of implementation plans up to six months following submittal of the rest of the TMDL. As discussed in today's preamble, EPA considers the implementation plan to be an integral part of the TMDL that is reviewed by EPA under section 303(d). Under today's rule EPA cannot approve the TMDL if it does not contain all the required elements, including an implementation plan. Therefore, the suggestion to defer submission of such plans to a later date would only further delay TMDL approvals, which is what EPA is attempting to prevent.

Today's rule also revises the proposed language regarding EPA's establishment of a TMDL during the transition. EPA proposed at § 130.38(b) that it may establish TMDLs using either approach, *i.e.,* the pre-promulgation or post-promulgation requirements. Some commenters misconstrued this language as a statement by EPA that it may choose not to establish TMDLs even if required to do so by court order or the statute. To eliminate confusion on this issue, EPA is using the word "will" instead or "may" in the final regulations. It is EPA's intention to use the new regulations as soon as possible. However, EPA recognizes that it may need to establish a TMDL where a State, Territory, or authorized Tribe has not, and to do so, EPA may need as much time as a State, Territory, or authorized Tribe to develop an implementation plan.

In particular instances, before the end of the transition period, where a schedule in a consent decree or settlement agreement would make it impossible to establish TMDLs with an implementation plan under the schedule, EPA would consider approaching the Plaintiffs to request an extension of the schedule so that TMDLs could be established using the new requirements. EPA expects that by the end of the transition period, States, Territories, and authorized Tribes will have established procedures for integrating implementation plan into TMDLs. EPA's expectation is that the transition period should greatly reduce the need for EPA to establish TMDLs pursuant to the existing consent decrees and settlement agreements.

X. Continuing Planning Process (§ 130.50)

What did EPA propose? EPA proposed to make only minor changes to the continuing planning process (CPP) requirements currently found at § 130.5. The proposal renumbered the section as § 130.50 and revised the current regulatory requirements to clarify that States, Territories and authorized Tribes have discretion to go beyond the mandatory plan elements set out in the regulation and also include other processes, such as watershed-based planning and implementation. The proposal also makes clear that a CPP need not be a single document but may be a compendium of many different State, Territorial and authorized Tribal planning documents. Finally, the proposal made conforming changes to citations to sections that are renumbered by the proposal.

What comments did EPA receive? EPA received a number of comments specific to this section. Three comments supported the proposal. One comment expressed concern that the proposed change required that the CPP be a document. A number of other comments suggested additional revisions to the existing CPP requirements.

What is EPA promulgating today? Based on its analysis of the comments received on this section, EPA is making one change to § 130.50(b) of the proposed rule. EPA is changing the final rule to recognize that the CPP need not be a single document. EPA acknowledges that the CPP is a process often described in numerous documents, rather than being a single document. EPA believes the revision in the final rule removes the confusion expressed over this. EPA declines to make the other requested changes for the reasons expressed in the Response to Comments Document.

Y. Water Quality Management Plans (§ 130.51)

What did EPA propose? EPA proposed to make only minor changes to the water quality management plan requirements currently found at § 130.6. EPA proposed to renumber the section as § 130.51 and to revise the current regulatory requirements to clarify that updates to water quality management plans should incorporate approved TMDLs and generally have a watershed focus. In addition, EPA rewrote proposed § 130.51(a) in plain English format.

What comments did EPA receive? EPA received a number of comments specific to this section. In most instances, only one commenter suggested a specific revision or addition. In four instances, multiple commenters made the same or similar comment. Two comments supported the proposal. Two comments suggested that § 130.51(a) retain the references to sections 208, 303, and 305 of the CWA that were in the existing rule. Two comments requested a change to or clarification of the part of the rule dealing with nonpoint source regulatory programs. Three commenters requested revisions to the existing rule language to clarify what a nonpoint source is. Another comment suggested that EPA recognize the link between the State Revolving Fund (SRF) and § 130.51(f).

What is EPA promulgating today? Based on its analysis of the comments received on this section, EPA is making three changes to § 130.51(a) of the proposed rule. First, EPA is reinstating the reference to CWA section 208 and 303(e) in the sentence describing the initial water quality management plan. Second, EPA is reinstating the reference

to CWA section 305(b) reports in the sentence describing what the annual planning should include. These references were in the existing regulation. EPA agrees that these references describe the authority and context for the water quality management plan, and wishes to maintain continuity between the requirements for water quality management plans prior to and after today's final rule. Third, EPA is adding a sentence to § 130.51(f) to recognize the link between the SRF and Water Quality Management Plans. This is a requirement of CWA section 603(f) that had not yet been incorporated into Part 130.

EPA does not interpret the revision of § 130.51(a) to require all States, Territories, and authorized Tribes to rewrite their initial water quality management plan. Again, the purpose of the revision is to clarify that updates to water quality management plans should incorporate approved TMDLs and generally have a watershed focus. Also, EPA does not interpret this revision to be a change in focus of the water quality management plan or CPP. EPA interprets the phrase "focus on priority issues and geographical areas" to mean essentially the same as the phrase "shall be based upon water quality problems identified in the latest section 305(b) reports." The section 305(b) reports generally identify priority water quality issues in geographical areas.

EPA declines to make other requested changes to the water quality management plan for the reasons stated below and in the Response to Comments document. EPA declines to require that States, Territories, and authorized Tribes adopt regulatory programs for nonpoint sources. The final rule continues the existing rule requirements that States, Territories, and authorized Tribes develop regulatory programs if they find it necessary. EPA also declines to revise § 130.51(c)(4)(iii) to further clarify what a nonpoint source is. EPA acknowledges that some residual waste, agriculture and silviculture, mines, construction, and urban storm water activities are considered point sources and are subject to NPDES permits. At the same time, some are not. EPA interprets § 130.51(c)(4) to apply only to activities that are not required to have an NPDES permit. Because EPA has referenced these sources in the context of "nonpoint source management and control," EPA believes that it is reasonable for others to make the same interpretation.

Z. Petitions to EPA to Establish TMDLs (§ 130.65)

What did EPA propose? EPA proposed to codify specific requirements to formalize a petition process for the public to request that EPA step in and perform duties imposed on States, Territories and authorized Tribes by section 303(d) when they fail to perform these duties. This petition process has been available to the public under the authority of the Administrative Procedure Act, but has seldom been used in the context of section 303(d). EPA made this proposal to increase public awareness of this procedure for requesting EPA action.

What comments did EPA receive? EPA received a number of comments specific to the petition process. Very few comments were fully supportive. Most comments argued that EPA should drop the provision entirely. Many comments expressed a concern that EPA was trying to impose this procedure as a mandatory first step before a party could bring a judicial action against EPA, and saw the petition process as an administrative barrier which would delay the party's right of redress. Other comments expressed concern that the petition process provided EPA a way to by-pass or undermine State authority and suggested that the final rule require petitioners to exhaust all State administrative remedies prior to petitioning EPA. Finally, other comments saw the petition provision as a way to exclude stakeholders from dialogue on TMDLs.

What is EPA promulgating today? Based on its analysis of the many comments received on this section, EPA is not including the petition provision in the final regulations. EPA continues to believe that a petition process would present the advantages outlined in the proposal at 64 FR 46040–46041, August 23, 1999. However, this opportunity is already available to the public as a matter of law. See 5 U.S.C. section 555(b). EPA does not believe it needs to provide specific regulatory requirements relating to a petition process.

EPA recognizes the concerns expressed in comments, and believes it has responded to these comments by not promulgating any specific provision for a TMDL petition. Many commenters misconstrued EPA's intent as creating an administrative process that either delays a party's right of judicial redress or excludes most stakeholders, including States, Territories and authorized Tribes, from a dialogue on TMDLs. These were not EPA's intentions. On the contrary, EPA believed the petition process provided a more expeditious way of resolving a party's concerns than the judicial process. Given the misunderstanding on the purpose and use of the petition process, EPA is not providing a specific petition process for TMDLs in the regulations. However, section 555(b) of the Administrative Procedure Act does allow any party to petition EPA to take action regarding lists and TMDLs, despite the absence of a specific TMDL petition process in Part 130.

AA. Water Quality Monitoring and Report (§ 130.10 and 130.11)

What did EPA propose? EPA proposed three minor changes to these sections. First, EPA proposed to identify the current EPA quality assurance guidance referred to in § 130.10(a). Second, EPA added source water assessments to the list of uses for data collected by State, Territorial, or authorized Tribal water quality monitoring in § 130.10(b). Finally, EPA proposed to revise § 130.11(a) to recommend that water quality problems identified in a section 305(b) report should be used in source water assessments.

What comments did EPA receive? EPA received many comments on these sections. Most of the comments suggested EPA adopt regulatory requirements to improve monitoring. These comments called for EPA to define the elements of an adequate monitoring program and provide both incentives and penalties to ensure that States monitor all waters of the State. Commenters also suggested EPA improve coordination among the many entities that monitor water quality. Comments on the water quality inventory report point out that this report is a state's comprehensive accounting of water quality, including healthy, threatened and impaired waters. Some commenters cited the need to improve these reports by requiring States monitor all waters of the State. Other suggested improvements include better analysis of the costs and benefits of achieving the goals of the CWA. A number of commenters expressed concern that EPA's proposed regulation makes the section 303(d) list a comprehensive accounting of State water quality which is redundant with the section 305(b) report. Some commenters suggested the water quality inventory report and the section 303(d) list should be consolidated, while others recommended they be kept distinct.

What is EPA promulgating today? EPA is promulgating these section as proposed with one change. EPA is moving the reference to the current

quality assurance guidance to a note. EPA made this change to facilitate including references to any future updates to this guidance.

EPA declines to make other changes to these sections as suggested by comments. EPA did not propose any regulatory requirements for monitoring or reporting, and believes that it would need to propose any such requirements before promulgating requirements.

AB. Other Sections (§§ 130.0, 130.1, 130.3, 130.7, 130.61, 130.62, 130.63, and 130.64)

What did EPA propose? EPA's August 23, 1999 recodification included sections of existing regulations for which EPA did not propose changes or request comment. These were included in the proposal to show how they would be reformatted in Part 130. 64 FR 46015, August 23, 1999. EPA explicitly identified the following sections as unchanged in the proposal: §§ 130.0, 130.1, 130.60, 130.61, 130.62, 130.63, and 130.64. EPA did propose a conforming change to § 130.64 to reflect that the citation for a TMDL had moved from § 130.7. EPA also proposed to delete § 130.3 and 130.61(d), and replace § 130.7 with the new requirements of subpart C. EPA believed § 130.3 duplicates the definition of "water quality standard" found in Part 131. EPA also believes that § 130.61(d) is obsolete because it pertains to a one-time data submittal under section 304(l) that was completed almost a decade ago.

What comments did EPA receive? EPA received no substantive comments on the sections that were proposed to be deleted. EPA received many comments on other sections, especially § 130.62, and § 130.63. Most comments did not suggest revisions to the final rule, but rather offered suggestions on how EPA could improve implementation of the TMDL program. The comments that suggested revisions were diverse and covered many themes. Other comments suggested specifically recognizing coastal nonpoint source programs, Federal land management, and the Great Lakes Water Quality Guidance in the regulations. Other comments offered suggestions on regulatory language related to improving the participation of indigenous people in all aspects of water quality planning and implementation. Finally, EPA received a comment that the language of § 130.61(b)(2) was inconsistent with the provisions proposed for lists of waterbodies, priority rankings, and schedules of TMDLs.

What is EPA promulgating today? With the exception of §§ 130.7 and 130.61, EPA is promulgating these sections as proposed. EPA did not propose revisions to §§ 130.0, 130.1, 130.60, 130.61, 130.62, 130.63, and 130.64 except for a conforming citation in § 130.64, nor did EPA request comment on these sections. Instead, EPA included these sections solely to illustrate the reformatting of Part 130 that results from writing the TMDL regulations in plain English format. Thus, EPA believes any comment on these sections is beyond the scope of the proposed rulemaking and declines to make changes as a result of comments. EPA will try to be mindful of any comments received on these sections when and if it does any further rulemaking on Part 130

EPA's proposed §§ 130.20 through 130.37 replace the requirements of § 130.7. However, for the period of 18 months from publication or nine months from the effective date of today's rule, whichever occurs later, § 130.37 allows States, Territories, authorized Tribes, and EPA to establish TMDLs consistent with either the requirements of §§ 130.31 through 130.33 of today's rule or § 130.7 from the previous rule. States, Territories, and authorized Tribes will need to be able to find the requirements of § 130.7(c), which contains the TMDL requirements, until they are no longer needed. For this reason, today's rule removes § 130.7 except for paragraph (c), and revises paragraph (c) to refer to the listing requirements of today's rule.

With respect to § 130.61, EPA found during the development of the final rule that § 130.61(b)(2), which requires identification of water-quality limited waters requiring TMDLs, and of waters targeted for TMDL development within the next two years, is inconsistent with both the proposed and final requirements for listing waterbodies. Therefore, EPA is deleting the requirements of § 130.61(b)(2) and reserving this paragraph. EPA believes that without this change, the Part 130 regulations would include two conflicting requirements causing confusion over what the regulations require. EPA believes this change is technical in nature and a logical outgrowth of EPA's proposal. EPA recognizes that it is making this change without soliciting public comment on this specific change. However, EPA did solicit comment on §§ 130.25 through 130.30, which are the technical and procedural requirements for section 303(d) lists of impaired waterbodies. Based on those comments, EPA promulgated the final rule for those sections. EPA expects that, had it solicited comments on whether it should revise § 130.61(b)(2) to conform with the information in §§ 130.25 through 130.30, the comments would have been supportive. Therefore, EPA believes that there is good cause under Administrative Procedure Act section 555(b)(3)(B) not to provide notice on this change because it is unnecessary to do so. Furthermore, EPA believes it is contrary to the public interest to expend the resources to solicit comment on eliminating an inconsistency in its rules when to do so is unnecessary. Therefore, consistent with the "good cause" provision of Administrative Procedure Act section 553(b)(3)(B), EPA believes it has good cause to delete and reserve § 130.61(b)(2) without proposing that change.

III. Changes to Parts 122, 123, and 124

A. Reasonable Further Progress Toward Attaining Water Quality Standards in Impaired Waterbodies in the Absence of a TMDL

1. Background

On August 23, 1999, EPA proposed revisions to the National Pollutant Discharge Elimination System (NPDES) Program and the Federal Antidegradation Policy in support of the revisions to the Water Quality Planning and Management regulations. These proposed revisions included new requirements and explicit authority to achieve reasonable further progress toward the attainment of water quality standards in impaired waterbodies in the absence of an EPA approved or established TMDL. EPA proposed a new requirement under the Federal antidegradation policy and proposed to revise the NPDES permitting regulations to implement that requirement. The proposed antidegradation requirement applied to all large new dischargers and existing dischargers undergoing a significant expansion proposing to discharge, to an impaired waterbody, the pollutant(s) for which the waterbody was impaired. The proposal stated that these dischargers would be required to achieve reasonable further progress toward the attainment of water quality standards in the waterbody to which they proposed to discharge. To achieve reasonable further progress, the proposal required these dischargers to obtain an offset of their new or increased loading of the pollutant(s) for which the waterbody was impaired. To obtain an offset, these dischargers would need to secure reductions from another existing source(s) discharging the pollutant(s) of concern into the same waterbody. The net effect of this offset would be a reduction in the loading of the pollutant of concern in the waterbody. Thus, reasonable further

progress toward the attainment of water quality standards in the waterbody would be achieved.

Also to achieve reasonable further progress in the absence of an EPA approved or established TMDL, EPA proposed explicit language describing the Regional Administrator's discretionary authority to review, object to, and reissue, if necessary, State-issued permits that are "administratively continued" after expiration. The proposal stated that this authority would be available when an expired permit authorizes a discharge into an impaired waterbody and the existing permit limits need to be revised. These permits were referred to as "environmentally-significant permits." The two situations in which EPA proposed to invoke this authority were when an expired permit contains effluent limitations or conditions inconsistent with water quality standards or inconsistent with an established TMDL. In the absence of a TMDL, invoking this authority would allow the Regional Administrator to review, object to, and reissue, if necessary, expired permits inconsistent with water quality standards to ensure that those permits contain adequate water quality-based effluent limitations. Permits that contain adequate water quality-based effluent limitations would, in turn, be consistent with water quality standards and, thus, reasonable further progress toward the attainment of water quality standards would be achieved. See section III.B.5. below for a discussion of where this authority could be invoked to ensure that an expired permit is consistent with an established TMDL.

2. Requirements for New and Significantly Expanding Dischargers

What did EPA propose? EPA proposed a new requirement under the Federal antidegradation policy and proposed revisions to the NPDES permitting regulations to implement that requirement, to achieve reasonable further progress toward the attainment of water quality standards in impaired waters in the absence of an EPA approved or established TMDL. EPA proposed these new requirements in response to the TMDL FACA recommendation that EPA actively encourage and support stakeholders stabilizing and enhancing water quality in impaired waterbodies before a TMDL is in place. Both EPA and the FACA recognized the significant time lag that could exist between the initial listing of a waterbody under CWA section 303(d) and the actual completion and approval of a TMDL. (See "Report of the Federal Advisory Committee on the Total Maximum Daily Load (TMDL) Program", EPA 100–R–98–006, July 1998.) As discussed in the preamble to the proposed rule, EPA believes that progress toward the section 101(a) goals of the CWA should occur even in the interim period between the initial listing of a waterbody under CWA Section 303(d) and the actual completion, approval and implementation of a TMDL. EPA therefore proposed to require that certain dischargers, located on an impaired waterbody discharging the pollutant for which the waterbody is impaired, achieve "reasonable further progress" toward the attainment of water quality standards.

The NPDES dischargers required to achieve reasonable further progress included a subset of dischargers proposing to discharge new loadings of a pollutant of concern to an impaired waterbody. This subset of dischargers included all large new dischargers and existing dischargers undergoing a significant expansion. EPA proposed revisions to the definition of a "new discharger" at § 122.2 as well as proposed a new definition of an "existing discharger" and what constitutes a "significant expansion" of an existing discharger. These proposed definitions were revised or added with the intent of defining the subset of dischargers subject to the proposed offset requirement.

EPA believed that the best way for these dischargers to achieve reasonable further progress was through an offset mechanism. The proposed offset mechanism would have required these dischargers to offset any new or increased loading of the pollutant of concern to an impaired waterbody by obtaining or securing reductions in the loading of the same pollutant from an existing source(s) located on the same waterbody. EPA stated that an offset of at least one and one half to one would generally be appropriate as a means of ensuring reasonable further progress. The proposal also specified several additional requirements for implementing offsets through NPDES permits. These revisions to the NPDES permitting regulations were designed to ensure that the offset and resulting reductions would be realized and, therefore, reasonable further progress would be achieved. The Agency believed that reasonable further progress toward meeting the applicable water quality standard would be achieved through this mechanism because the total load of the pollutant(s) to the impaired waterbody would be reduced.

The proposal also would have required the permitting authority to include, in the fact sheet for the permit (required under § 124.8), an explanation of how and why any limitations and/or requirements were derived to satisfy an offset requirement. Where fact sheets are not required, EPA proposed that similar information be included in the statement of basis for the permit (required under § 124.7).

To emphasize the importance of State antidegradation policies, including the proposed offset requirement, EPA proposed to include the phrase "State antidegradation provisions" in its water quality-based permitting regulations at § 122.44(d)(1). Section 122.44 contains the requirements for establishing limitations, standards and other permit conditions in NPDES permits necessary to ensure that NPDES permits are protective of water quality standards. The purpose of including this phrase was clarifying only and was not intended to create a substantive change. Including this phrase in these provisions was intended to give added notice and clarification to the longstanding requirement at § 131.12 that States, at a minimum, include in their water quality standards an antidegradation policy consistent with the Federal antidegradation policy, and identify their methods and procedures for implementing that policy.

What comments did EPA receive? The following summarizes certain major comments the Agency received on the proposal requiring large new and significantly expanding existing dischargers located on impaired waterbodies to obtain offsets of their new pollutant loads. There was widespread concern that the proposal to require offsets was virtually impossible to implement and environmental efficacy on a national scale would have therefore been unlikely. Many commenters noted that a one-size-fits-all approach was infeasible due to the differences between the types of sources subject to the offset requirement, the differences in the nature of the discharges from the sources subject to the offset requirement, and the differences in the types of NPDES permitting used for sources subject to the offset requirement. A significant number of commenters also expressed concern regarding the requirement that the offset be achieved on or before a source could begin discharging as well as the distinct likelihood that there might be no source in the waterbody from which an offset could be obtained. They pointed out that this would cause significant delay in the operation or construction of their business and

possibly even prevent them from operating at all.

Several commenters stated that the offset provision, as proposed, would be particularly difficult to implement with respect to wet weather sources. With respect to storm water, commenters expressed that it would be difficult to predict the contents and/or flow of storm water runoff because wet weather events vary in terms of frequency and duration of rainfall as well as other uncontrollable factors (e.g., the use of copper brake pads, leaking oil pans on cars) that contribute to the contents and/or flow of storm water runoff. Similar concerns were raised with respect to obtaining offsets from nonpoint sources. Commenters stated that pollution reductions would be difficult to measure or quantify due to the variability in flow, pollutants and loading. They also noted the difficulty in demonstrating the impact or level of reductions achieved by nonpoint source control measures or BMPs. The Agency also received many comments that claimed that the offset provisions, as proposed, would have an adverse effect on trading. For point source to nonpoint source trades, commenters asserted that the offset provision would provide a disincentive for point sources to trade because they would be held liable for a nonpoint source's failure to achieve the requisite reductions.

Commenters expressed concern over the implications the offset requirement would have on the use of general permits. Many stated that offsets could not be implemented through general permits. Although the Agency did not propose an approach to implement offsets for dischargers that seek coverage under general permits, many commenters were concerned that the offset requirement, as proposed, would have caused a large number of dischargers to seek coverage under individual permits instead of general permits. Commenters also noted that they would experience considerable delays in their operations and increased costs if they had to seek coverage under an individual permit.

A significant number of commenters stated that the proposal to require offsets established an inequitable allocation of responsibility between large and small dischargers and was, thus, inconsistent with the goals of the CWA. Many asserted that the proposal to require offsets conflicted with and impeded the TMDL program thereby delaying the attainment of water quality standards. Some commenters also asserted that the proposal to allow new discharges and require offsets would have undercut the ability to interpret § 122.4(i) as requiring an absolute prohibition on new discharges to impaired waters. Finally, while many commenters agreed that there should be reasonable further progress toward improving water quality in the period before a TMDL is approved or established, they asserted that the proposed offset requirements would undercut State primacy in determining what actions are necessary to attain water quality standards.

The Agency also received several comments on the proposed definitions for existing, new and significantly expanding dischargers. The Agency proposed these definitions for the sole purpose of implementing the offset provision. Many commenters suggested that these definitions were "confusing and unworkable." Most commenters were concerned that the definitions were not consistent with existing definitions for related and separate programs. Some commenters also stated that the definition describing significant expansion was not scientifically based. For example, the definition did not specify whether the 20% increase in loadings was related to concentration or mass.

What is EPA promulgating today? After considering comments received and upon further analysis of what the Agency proposed, EPA is not promulgating the revisions to the Federal antidegradation policy and NPDES regulations that would require certain dischargers to achieve reasonable further progress toward the attainment of water quality standards by obtaining an offset of their new or increased pollutant loads (hereafter "the offset requirement"). EPA continues to believe, however, that further degradation of already impaired waterbodies should be prevented and that progress toward the attainment of water quality standards should be made in the interim period between the identification of an impaired waterbody and the establishment of a TMDL. EPA does not believe it is necessary to amend the antidegradation regulations to explicitly include such a requirement because EPA has concluded that the offset requirement, as proposed, is not the best mechanism to achieve progress in impaired waters in the absence of a TMDL. The Agency based this conclusion on several considerations.

Subsequent to the proposal, EPA gained additional insight into current practices for deriving water quality-based effluent limits for sources located on impaired waters and discharging the pollutant(s) for which the waterbody is impaired. EPA found a wide range of practices for deriving such limits with respect to both new dischargers and existing dischargers. The Agency believes that there is considerable room for improvement in establishing water quality-based effluent limits for all dischargers (new dischargers being permitted for the first time and expanding and existing dischargers undergoing permit reissuance) discharging pollutant(s) of concern to an impaired waterbody (emphasis added). EPA therefore concluded that its existing regulations, implemented consistently at the time of permit issuance, would provide greater progress toward the attainment of water quality standards in impaired waters than through the proposed offset requirement.

As proposed, the offset requirement (in addition to existing regulatory requirements) would be very difficult to apply and only affect a small subset of dischargers. Thus, the likelihood of achieving additional progress toward attaining water quality standards for a significant number of impaired waterbodies through the offset provision, in the aggregate, would be quite small. EPA further believes that expanding the application of the requirement to additional dischargers, as some commenters suggested, would still not have significant environmental benefit for the reasons discussed below.

Many commenters pointed out, and upon further analysis EPA agrees, that the proposed offset requirement, a one-size fits all method for specifying reasonable further progress, is simply unworkable. As proposed, it would have been extremely difficult for a majority of the sources within the very small subset of sources to which it would have applied, to implement an offset requirement (*e.g.,* those sources with intermittent discharges or discharges only as a result of storm events and those regulated through general permits by best management practices (BMPs)). Calculating what constitutes a one and one half to one offset for sources with intermittent discharges would have often been extremely subjective. Likewise, as proposed, it would have been difficult or infeasible to implement the offset requirement with respect to dischargers that seek NPDES permit coverage under a general permit. Typically, general permits do not contain numeric water quality-based effluent limitations (WQBELs); they contain BMPs designed to ensure protection of water quality standards. It would have been difficult or infeasible to quantify, and thereafter implement, a one and one half to one offset from a source whose water quality impacts are controlled solely by BMPs.

EPA also concluded that the additional environmental benefits from the offset requirement, in many cases, would have been minimal at best, even if expanded to cover additional dischargers as some commenters suggested. The offset requirement would have been a requirement over and above the requirements under current NPDES permitting regulations at §§ 122.44(d)(1)(vii) and 122.4(i). Section 122.44(d)(1)(vii) requires permits to include, where necessary, effluent limits that derive from and comply with water quality standards. Section 122.4(i) prohibits the issuance of permits to a new source or a new discharger if the discharge will cause or contribute to a violation of water quality standards. For those dischargers who would have been subject to the offset requirement, consistent implementation of §§ 122.44(d)(1)(vii) and 122.4(i) following existing EPA guidance would result in permits, if issued, containing limits and conditions for the pollutant(s) of concern that derive from and comply with applicable water quality standards. These limits and conditions are water quality-based effluent limits and, if derived in compliance with existing regulations, ensure that the discharge will not cause or contribute to a violation of water quality standards. These limits would define the amount of the pollutant(s) in the discharger's effluent that could not be exceeded. In most cases, where a discharge is to an impaired water, this amount (the water quality-based effluent limit) would be quite small. Using either a numeric criterion or a quantitative translation of a narrative criterion, the limits would be calculated to ensure that the discharger did not cause or contribute to an excursion of that criterion in the receiving water. Also, a permitting authority may determine that this limit must reflect an overall reduction in pollutant loading to the waterbody in order to ensure that the discharge does not cause or contribute to a violation of water quality standards. Thus, where existing regulations for water quality-based permitting are appropriately implemented, the additional offset that EPA proposed to require of such dischargers (150% of the water quality-based effluent limit), in most cases, would not have had a significant effect on ambient water quality. Given this and the fact that applying the offset to many types of discharges would be extremely difficult or even infeasible, as discussed above, EPA concluded that the net environmental benefits from the offset requirement would be insignificant.

Although EPA is not promulgating regulations containing the offset requirement, EPA expects to achieve progress toward the attainment of water quality standards in impaired waters in the absence of a TMDL. EPA believes that progress toward the attainment of water quality standards prior to a TMDL would be achieved through consistent implementation of EPA's existing regulatory authorities.

EPA's current water quality-based permitting regulations and accompanying guidance apply not only to new and expanding dischargers, but to all dischargers. These regulations require that NPDES permits have conditions as necessary to achieve water quality standards established under section 303(c) of the CWA. § 122.44(d)(1). The permitting authority must therefore determine whether a discharge causes, has reasonable potential to cause, or contributes to an in-stream excursion above the applicable water quality standard. In making this determination, the permitting authority must "account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and, where appropriate, the dilution of the effluent in the receiving water." § 122.44(d)(1)(ii). Where water quality-based effluent limits are needed, the regulations are designed to ensure that those limits derive from and comply with water quality standards and, therefore, ensure that dischargers subject to such limits will not cause or contribute to the violation of water quality standards. §§ 122.44(d)(1)(vii) and 122.4(i).

EPA has developed guidance for applying the water quality-based permitting regulations. The "Technical Support Document for Water Quality-Based Toxics Control" (TSD) U.S. EPA, EPA/505/2–90–001, March 1991 and the Water Quality Guidance for the Great Lakes System (60 FR 15366, March 23, 1995) (hereafter "Great Lakes Guidance") include procedures for making the determination of whether a discharge causes, has reasonable potential to cause, or contributes to an instream excursion above the applicable water quality criteria (the "reasonable potential analysis"). These procedures also present options for developing wasteload allocations (the basis for effluent limits) which ensure that a discharge does not cause or contribute to the nonattainment of applicable water quality standards. Thus, while both are primarily focused on toxics, and the Great Lakes Guidance applies to the Great Lakes, both serve as practical guides for developing effluent limits to ensure compliance with both §§ 122.44(d) and 122.4(i).

As mentioned above, the Agency found various interpretations and implementation methods for applying the water quality-based permitting regulations and the Agency's accompanying guidance. For example, EPA found varied consideration of other source contributions and background concentrations in the receiving water when determining the need for water quality-based effluent limits and setting water quality-based effluent limits for pollutants of concern in compliance with § 122.44(d). EPA notes it has a longstanding interpretation of § 122.44(d) regarding consideration of source contributions and background concentrations, as presented in the TSD since 1991.

EPA notes that the TSD references using background concentration when calculating wasteload allocations. For example, on p. 97, the TSD states, "Traditional single-value or two-value steady-state wasteload allocation models calculate wasteload allocations at critical conditions, which are usually combinations of worst-case assumptions of flow, effluent, and environmental effects. For example, a steady-state model for ammonia considers the maximum effluent discharge to occur on the day of lowest river flow, *highest upstream concentration,* highest pH, and highest temperature" (emphasis added). Also, it is particularly noteworthy that every case example in the TSD uses an ambient background concentration value of the pollutant of concern when determining reasonable potential and calculating wasteload allocations and effluent limits.

An assessment of the ambient background concentration in the receiving water is *the* element of the reasonable potential analysis presented in the TSD that represents the nonattained condition of waters not meeting water quality standards because they are exceeding water quality criteria. This element of the reasonable potential analysis is necessary to account for existing controls on point and nonpoint sources of pollution and available dilution as required by § 122.44(d)(1)(ii). Failure to use a background value would result in evaluating the discharge to the nonattained water as if the water were actually attaining its water quality standards. Simply put, use of valid, verifiable ambient background values is imperative to technically sound effluent characterization and analysis of the

need for water quality-based effluent limits.

Furthermore, where there is valid, verifiable background data indicating existing impairment of a waterbody, such data must be taken into consideration when developing water quality-based effluent limits for a discharge to an impaired water. EPA is aware that some permitting authorities, when calculating wasteload allocations that are the basis for water quality-based effluent limits, have, on occasion, made the assumption that background concentrations of the pollutant(s) of concern are zero, even in view of valid and verifiable background data, and have proceeded to allocate all of a waterbody's assimilative capacity to one or more point sources. Such an assumption is inconsistent with NPDES regulations requiring that water quality-based effluent limits derive from and comply with water quality standards (§ 122.44(d)(1)(vii)), and longstanding Agency guidance and policy on complying with the regulations.

Once again, EPA notes that the TSD indicates the need to consider background concentrations of the pollutant(s) of concern when developing wasteload allocations and water quality-based effluent limits. Where valid, verifiable data and information that are representative of ambient conditions indicate that the waterbody is not attaining water quality standards, there is no basis for permitting a discharge to an impaired water as if the waterbody were not impaired. Where such data are available, the permitting authority has no alternative but to use those data when calculating wasteload allocations and effluent limits. For discharges to an impaired water where ambient pollutant concentration is the cause of impairment, including background pollutant concentrations in all permit limit calculations will result in water quality-based effluent limits based on a wasteload allocation that attains the applicable criteria or a lower pollutant concentration in the effluent (*i.e.,* "criteria end of pipe" or better). Of course, a permitting authority may have new or additional data about the ambient water quality, presented by the discharger or collected by the permitting authority itself. Those additional data would allow for a more site-specific evaluation of the need for water quality-based effluent limits and of the calculation of wasteload allocations and effluent limits than was perhaps possible when a decision was made to list the waterbody on the section 303(d) list.

EPA recognizes the need for further clarification to authorities implementing the NPDES program of existing NPDES regulations and guidance on water quality-based permitting. In addition, further guidance is needed to ensure that permitting authorities adequately protect designated uses through complete consideration of both applicable narrative and numeric criteria when developing effluent limits that derive from and comply with all applicable water quality standards (§ 122.44(d)(1)(vii)). Narrative water quality criteria establish the basic foundation for attainment of designated uses, while numeric water quality criteria provide a specific quantitative translation of the necessary level of protection.

In some situations, there are no numeric criteria for a pollutant of concern or the permitting authority may determine that the existing numeric criteria are not designed to address an important endpoint of concern. When numeric criteria are developed, it is not possible to anticipate all pollutants or endpoints or derive some types of criteria that will apply generally across the Nation's waters or all of the waters of a State or Tribe. Often there are not sufficient data to develop site-specific numeric water quality criteria at the time of water quality standards adoption. Recognizing these situations, standards setting authorities adopt narrative criteria to ensure full protection of designated uses. Narrative criteria can descriptively accomplish what numeric criteria, in many cases, cannot account for quantitatively at the time water quality standards are adopted. For example, fish contamination as a result of site-specific bioaccumulation or algal blooms from nutrient over enrichment may impair a designated use, but may not be sufficiently addressed by adopted numeric water quality criteria. Applicable narrative criteria, however, can often be translated into a quantitative measurement that will protect a specific endpoint from a specific pollutant not accounted for by the applicable numeric criteria.

The NPDES regulations at § 122.44(d)(1)(v) and (vi) are particularly instructive to permitting authorities developing water quality-based effluent limits from narrative water quality criteria in order to meet the requirement that such limits derive from and comply with all applicable water quality standards. The NPDES regulations require that if a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion of an applicable narrative criterion, the permit must contain effluent limits for whole effluent toxicity. Whole effluent toxicity limits are not necessary, however, if the permitting authority demonstrates that chemical-specific effluent limits for the effluent are sufficient to attain and maintain applicable numeric *and narrative* water quality standards (emphasis added). The regulations describe how to develop water quality-based effluent limits for a specific pollutant in this situation. The permitting authority must develop effluent limits based on one of the following options: (1) use a calculated numeric water quality criterion that the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use [This criterion may be derived using a criterion proposed by the standards setting authority or an explicit policy or regulation interpreting the authority's narrative criterion, supplemented with other relevant information]; (2) on a case-by-case basis, use EPA's water quality criteria, published under Section 304(a) of the Clean Water Act, supplemented where necessary by other relevant information; or (3) under certain conditions, use an indicator parameter for the pollutant of concern.

EPA understands that permitting authorities will take a variety of approaches to interpreting designated uses and the criteria necessary to protect those uses, characterizing effluent quality, and deriving wasteload allocations and permit limits. EPA believes, however, that permitting authorities do not always quantitatively translate applicable narrative criteria, nor do they always apply the most stringent permit limit when both numeric criteria and numeric interpretations of narrative criteria are available and applicable. The NPDES regulations require permitting authorities to evaluate the reasonable potential for an effluent to cause or contribute to an excursion of *both numeric and narrative criteria* in order to evaluate whether the underlying designated use will be maintained and protected and, where necessary, derive water quality-based effluent limitations from those criteria. Where there is uncertainty about what numeric value should be used that represents either the numeric or narrative water quality criterion (the water quality value on which the effluent characterization must be based), EPA believes this uncertainty must be resolved before a permit is issued. EPA believes that, instead of resolving this uncertainty, some permitting authorities may be issuing permits with inadequate permit limits

that do not conform to the water quality-based permitting regulations.

EPA believes that further clarification and additional guidance on interpreting and implementing the water quality-based permitting regulations are needed. Rather than promulgating a new regulatory requirement that is difficult to apply and offers potentially little environmental benefit over adequate implementation of current NPDES regulations, the Agency believes that improved implementation of the current regulatory program will yield better and more significant progress in attaining and maintaining water quality standards nationwide. The Agency, therefore, is intending to achieve more consistent implementation of existing NPDES regulations and guidance. EPA intends to provide further guidance to clarify the Agency's recommendations for methods and procedures for developing water quality-based effluent limits for sources discharging a pollutant of concern to an impaired waterbody in the absence of a TMDL. EPA expects that this guidance will address approaches to deriving permit limits both in situations where there are applicable numeric criteria that address the cause of impairment and situations where there are no applicable numeric criteria that address the cause of impairment.

In summary, EPA believes that ensuring adequate and consistent implementation of existing water quality-based permitting regulations for all dischargers located on impaired waterbodies will lead to substantial improvement in the quality of the Nations's waters. EPA notes that the TMDL, once established, may include waste load allocations that may result in the need for permit limits to change.

Definitions

EPA is not promulgating the proposed revisions to the definition of a "new discharger" (§ 122.2) as well as the proposed new definition for an "existing discharger" and what constitutes a "significant expansion" of an existing discharger. EPA is not promulgating these proposed definitions because it is not promulgating the proposed offset requirement. These proposed definitions were revised or added with the intent of defining the subset of dischargers subject to the proposed offset requirement.

Fact Sheet and Statement of Basis

EPA is not promulgating revisions to the regulatory provisions on fact sheets (§ 124.56) or revisions to the regulatory provisions on statement of basis (§ 124.7) as proposed. EPA proposed changes to these provisions to clarify that the permit writer must provide all information necessary to explain the derivation of permit conditions. In particular, these proposed changes were designed to capture, in the record of the permit, the rationale for and derivation of the proposed offset requirement. Because EPA is not promulgating the offset requirement, the proposed changes regarding fact sheets and statements of basis are unnecessary. EPA continues to believe, however, that it is important to clarify the type of information that a permit writer must provide to explain the basis for and derivation of permit limits and conditions. In light of the scope of today's rule, the Agency believes that providing an adequate explanation is particularly important for permits that authorize discharges to impaired waters both prior to and after the establishment of a TMDL. EPA is therefore establishing such clarifications to the fact sheet regulations at § 124.8 and to the statement of basis regulations at § 124.7.

Section 124.8 requires that a fact sheet be prepared for certain permits identified under that section. Section 124.7 requires EPA to prepare a statement of basis for every draft permit for which a fact sheet is not prepared. The purpose of including a fact sheet or a statement of basis with the permit is to provide a mechanism that helps the permittee and any other interested party understand how and why limits, conditions, and/or requirements in the accompanying NPDES permit were derived. This information also helps the permittee and other interested parties participate in the decision-making on what will be included in the final permit; an explanation of how and why these measures were derived enables the public to participate in the final decision.

Today's rule clarifies what data and information must be placed in the fact sheet and statement of basis for permits authorizing discharges to impaired waters. Specifically, the clarifications to the fact sheet and statement of basis regulations concern information which must be provided when a permit is developed for the discharge of a pollutant into a water which is impaired for that pollutant. Where a fact sheet or statement of basis is required, the Agency believes the records for such permits must contain a full explanation of the basis for water quality-based limits including those for a pollutant(s) for which a waterbody is impaired. Specifically, the fact sheet or statement of basis must contain: (1) In cases where a TMDL has not been established for an impaired waterbody, an explanation of how permit limits and/or conditions were derived for all pollutants in the discharger's effluent for which the waterbody is impaired; and (2) in cases where a TMDL has been established for an impaired waterbody, any TMDL that has been established for a pollutant contained in the discharger's effluent; the applicable wasteload allocation derived for the pollutant under the TMDL for that discharger; and an explanation of how permit limits for the pollutant of concern were derived as well as how those limits are consistent with the applicable wasteload allocation.

EPA interprets its existing regulations to require this information already. Specifically, § 124.8(b)(4) requires the fact sheet to include "a brief summary of the basis for the draft permit conditions * * *." Section 124.7 requires the statement of basis to "briefly describe the derivation of the conditions of the draft permit and the reasons for them* * *;" Also, § 122.44(d)(1)(vii)(B) requires the permitting authority to ensure that "effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to § 130.7." Evidence of this longstanding interpretation is found in EPA's "Technical Support Document for Water Quality-based Toxics Control" where the Agency refers to the fact sheet regulations at § 124.56 and states that "the wasteload allocations along with the required long-term average and coefficient of variation used and the calculations deriving them must be included or referenced in the fact sheet. The permit limit derivation method used must also be explained in the permit documentation." (EPA/505/2–90–001, March 1991, p.110). By revising these regulations to include today's clarifications, the Agency is merely emphasizing the importance of providing data and information for permit limits and conditions contained in permits authorizing discharges to impaired waters both prior to and after the establishment of a TMDL. Making this concept completely explicit in the regulations will help to clarify EPA's previous intent behind these provisions and ensure consistency in fact sheets and statements of basis accompanying permits for discharges into impaired waters. In addition, these clarifications to the existing regulations are consistent with the provisions in the proposal requiring fact sheets and statements of

basis to include an explanation for the basis of any offset obtained in an impaired water.

Adding these clarifications also improves the ability to track whether permits requiring a fact sheet or statement of basis contain limits that derive from and comply with applicable water quality standards as well as whether the limits are consistent with an applicable TMDL. EPA intends to track information in order to monitor and report progress nationally on permitting in impaired waters. The Agency believes tracking this information supports the purposes and goals of the CWA, to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. The Administrator also bears a statutory responsibility under CWA section 303(d) to ensure timely establishment of TMDLs and an obligation under CWA section 301(b)(1)(C) to ensure that permits include water quality-based effluent limits as necessary to meet water quality standards. Tracking these data will help to ensure that needed water quality-based effluent limits are placed in all permits requiring them prior to a TMDL. It will also help to ensure that TMDLs, once established, are in fact, implemented.

Revisions to the Water Quality-based Permitting Regulations

Although EPA is not promulgating the offset requirement, the Agency still believes emphasis should be placed on State antidegradation policies as part of a State's water quality standards. EPA, therefore, is promulgating the clarifying change to the water quality-based permitting regulations by adding the phrase "State antidegradation provisions" to section § 122.44(d)(1).

3. EPA Authority to Reissue Expired and Administratively-Continued NPDES Permits Issued by Authorized States

What did EPA propose? Under the NPDES program regulations, a Regional Administrator may review and object to an NPDES permit that an authorized State proposes to issue. The procedures by which a Regional Administrator may review and object to these permits are found in § 123.44. EPA proposed a new mechanism by which a Regional Administrator could trigger these procedures for two purposes. EPA proposed to grant the Regional Administrator the discretion to trigger these procedures to (1) achieve reasonable further progress toward the attainment of water quality standards in impaired waters in the absence of a TMDL; and (2) ensure that established TMDLs are, in fact, implemented. This proposed discretionary authority would be available to the Regional Administrator to achieve these goals by using the procedures in § 123.44 to address a subset of existing expired State-issued NPDES permits. This authority could be exercised when an NPDES permit that has been administratively-continued after expiration authorizes a discharge to a waterbody that does not attain and maintain water quality standards where there is a need for a change in the existing permit limits to be protective of water quality standards. In the preamble to the proposal, these permits were referred to as "environmentally-significant permits."

To achieve reasonable further progress toward the attainment of water quality standards in impaired waters in the absence of a TMDL, proposed § 123.44(k) would give EPA the discretion to treat a subset of environmentally-significant State-issued permits that are administratively-continued after expiration as the State's submission of a permit for EPA review under § 123.44. This subset of permits includes those permits that authorize discharges of a pollutant(s) of concern (*i.e.,* a pollutant(s) for which the waterbody is impaired) to a waterbody that does not attain and maintain water quality standards for those pollutants and for which EPA has not established or approved a TMDL. EPA proposed that this authority be available to the Agency where there is a need for a change in the existing permit limits. Specifically, this authority could be invoked where there is a need to include more adequate and protective water quality-based effluent limits in order to ensure that such limits derive from and comply with applicable water quality standards. See § 122.44(d)(1)(vii).

EPA proposed to assert the Agency's discretion to exercise the authority to use these procedures for a State-issued permit that meets the conditions above, where that permit has been expired and administratively-continued for more than 90 days, and where the State has failed to reissue that permit. The Agency's NPDES regulations require that an existing permittee submit a new permit application at least 180 days before an existing permit expires (§ 122.21(d)(2)). When a permittee has submitted a timely and complete application for renewal, but the State Director fails to act on the permittee's application before the existing permit expires, States' laws often provide that the existing permit continues in effect by operation of law. The permit remains in effect by operation of law until the State takes final action on the permittee's application (until the State makes a final decision to grant or deny a new permit). This is often referred to as "administrative continuance." These State laws, like the corresponding provisions in § 122.6 and the Federal Administrative Procedure Act at 5 U.S.C. 558(c), aim to protect a permittee who has submitted a timely and complete application for renewal. Such State laws protect a permittee from losing its authorization to discharge simply because the permit-issuing authority has not issued a new permit before the existing permit expires.

In some cases, administrative continuance of expired permits provides States with flexibility to prioritize their action without significant adverse impacts on receiving waters. However, administrative continuance also may lead to inappropriate delays in reissuing permits that need revision to comply with current requirements. State administrative-continuance laws typically allow an expired permit to remain administratively-continued indefinitely. Therefore, a lengthy administrative continuance of a permit for a discharge into an impaired waterbody can significantly delay the implementation of needed water quality-based effluent limitations. Under EPA's existing regulations, no mechanism currently exists by which to invoke the Agency's permit review and objection authority to address this situation. The proposed authority and the procedures to invoke this authority would provide that procedural mechanism.

The proposal provided that if, after notice, the State failed to submit to EPA a draft or proposed permit for a discharge into an impaired waterbody within 90 days following the permit expiration date, the Regional Administrator could treat the expired and administratively-continued permit as the State's submission of a draft or proposed permit for EPA review under § 123.44. For EPA to exercise this discretionary review authority, EPA would give the State and the discharger 90-days notice of its intent to treat the administrative-continuance as the reissuance of a permit containing the same terms as the permit that had expired. EPA could provide this notice at any time following the 90-day period after permit expiration. EPA's use of this new mechanism would be discretionary.

Once the environmentally-significant, administratively-continued permit was subject to review under § 123.44 procedures, EPA would be able to comment on, object to, or recommend

changes to the permit. If the State, under § 123.44(a), submitted a draft or proposed permit for EPA review at any time before authority to issue the permit passed to EPA under § 123.44(h), EPA would withdraw its notice of intent to assume permitting authority. At that point, existing rules on EPA objection to State-issued permits would govern. Therefore, EPA could take any appropriate action, including transmission of comments on or possible objection to the new draft or proposed permit submitted by the State. Furthermore, EPA's ability to invoke this authority would continue until the State issues the final permit. In other words, if a State submits a draft or proposed permit that EPA believes resolves all of the concerns under the objection but fails to issue the final permit, EPA could invoke this authority again and object to the original (expired and administratively-continued) permit.

In the proposal, the Agency stressed that the new review mechanism would be used only in those circumstances where other means of working with the State to reissue the permit failed. At any time during this process, the State is encouraged to explain to EPA the reasons for not reissuing the expired permit. The Agency will carefully consider any such explanation before proceeding with these objection procedures. Similarly, the Agency would not expect to depend heavily upon the proposed mechanism in States whose administrative continuance laws operate for limited periods of time.

As noted in the preamble to the proposed rule, § 123.44(k) would apply only to those expired, State-issued permits for which a timely and complete application for renewal has been submitted to the State, and for which State law has provided for continuation of the expired permit. The new provision would not apply to unpermitted discharges. Existing authority allows the Agency to institute judicial or administrative actions against unpermitted dischargers for discharging without a permit, even if they have submitted an application to the State and the State has not issued the permit.

EPA recognized in the preamble to the proposed rule that many administratively-continued permits for discharges into impaired waters have not been reissued and that the Agency expects to exercise its discretion to use this authority only in very rare instances and only with respect to environmentally-significant permits. The Agency intends to use its discretion under this provision as one way to help ensure that these permits will be issued in a timely manner to support the fulfillment of the CWA goals to ensure that water quality standards are maintained and protected.

EPA's authority to make these changes to its regulations was discussed at length in the proposal. EPA restates the most important elements of that discussion here. Section 301(b)(1)(C) of the Act directs EPA and the States to include water quality-based effluent limitations in NPDES permits that will enable the waterbody to meet the applicable water quality standards. Also, CWA section 501(a) allows the Agency to promulgate a regulation to implement CWA section 402(b)(1)(B) and EPA's authority in CWA section 402(d) to prevent a State from avoiding (or postponing by lengthy administrative continuance), what otherwise would be required by reissuance. The Agency bears an obligation under CWA section 402(c)(2) to ensure that State programs and State-issued permits comply with the requirements of the Act including section 402(b)(1)(B). NPDES permits may not be issued for periods exceeding five years (CWA section 402(b)(1)) and should be reviewed and revised in a timely fashion to ensure compliance with the CWA and applicable regulations.

What comments did EPA receive? The following summarizes the major comments received on the proposed authority for EPA to review, object to, and reissue, if necessary, a State-issued NPDES permit that has been administratively-continued after expiration. The majority of comments received on this proposed provision asserted that EPA does not have the statutory authority under the CWA to amend the NPDES regulations to permit the Agency to review, object to, and reissue State-issued NPDES permits that have been administratively-continued. Many of these commenters stated that Congress intended authorized States to have complete authority to administer the NPDES program and that EPA should not undermine any portion of that authority. Some commenters asserted that the only statutorily-authorized mechanism EPA has to address State-issued, administratively-continued permits is to withdraw the approval of a State's NPDES program.

Several commenters expressed their concern that EPA does not have the resources to effectively take on this additional regulatory responsibility. To support this argument, these commenters cited EPA's current permit backlog. Many also asserted that EPA does not have the expertise to do a better job than the State. These commenters argued that State agencies have a much closer relationship with their NPDES permittees and would, therefore, have a better understanding of all aspects of the permits and necessary requirements.

A number of commenters strongly supported this proposed change to the NPDES regulations. Some commenters expressed their belief that EPA already has the authority to review any and all NPDES permits. These commenters argued that EPA has an obligation under the CWA to ensure that all State programs and State-issued permits comply with the requirements of the Act. Some expressed their belief that the proposed regulatory language limits EPA's review of expired permits by allowing this authority to be invoked only for those expired permits authorizing discharges to waters that do not attain and maintain water quality standards. These commenters suggested that the authority be broadened to allow for review of all State-issued permits that have been administratively-continued after expiration. Several commenters also expressed their belief that this authority should be mandatory rather than discretionary, *i.e.,* EPA should be required to review, and reissue, if necessary, all administratively-continued permits. These commenters asserted that delaying review results in unlawful continued approval of permits authorizing discharges in violation of water quality standards and established TMDLs.

Some commenters expressed procedural concerns regarding the proposed provision. Many asserted that this proposed authority constituted a "second veto" authority because the Agency already had the chance to object to the permit after the State's notification of its intent to issue the original NPDES permit. Others suggested extending the period for States to Act after EPA notice from 90 days to two years. These commenters argued that this time is necessary to resolve all permitting issues, including the very complex process of incorporating the applicable wasteload allocations that are derived under a TMDL. Some recommended that EPA only allow this authority in waters that do not attain and maintain water quality standards where a TMDL has been established.

What is EPA promulgating today?

After considering all of the comments EPA received on the proposed mechanism and considering further the purpose of the underlying authority, EPA is today promulgating the

regulations proposed at § 123.44(k) except as explained later in today's preamble. The Regional Administrator will generally have the discretionary authority to review, object to, and reissue, if necessary, environmentally-significant State-issued NPDES permits that have been administratively-continued after expiration. An environmentally-significant permit authorizes a discharge to a waterbody that does not attain and maintain water quality standards where there is a need for a change in the existing permit limits to be protective of water quality standards.

The availability of this authority is important for permits that authorize discharges of pollutant(s) of concern to waterbodies in the absence of an EPA approved or established TMDL. In particular, the availability of this authority, under these circumstances, is important for permits that do not contain limits and/or conditions that derive from and comply with water quality standards. Again, the Agency expects to use this authority only in rare instances as States will continue to have the primary role in administering the NPDES program. The Agency believes that this mechanism advances the goals of the CWA, to attain and maintain water quality standards. The Agency further believes that this authority is necessary to facilitate the fulfillment of EPA's statutory responsibility to include water quality-based effluent limitations in NPDES permits that meet the applicable water quality standards. (CWA section 301(b)(1)(C)).

In response to comments opposing this provision, EPA does not believe that Congress intended authorized States to have unfettered discretion with regard to NPDES permitting after authorization. Congress expressed its clear intent regarding State-issued NPDES permits in the specific text of CWA sections 402(b)(1)(B) and (c)(2) and today's rule improves implementation of those provisions. EPA action on this provision of today's rule does not undermine State authority, but rather enhances the authority and responsibility of authorized States to the extent that a discharger with an expired permit may affirmatively seek action from the State (compared to the status quo where the discharger with an expired permit has no incentive to seek action from the State).

B. New Tools To Ensure Implementation of TMDLs

1. Background

In addition to ensuring reasonable further progress toward the attainment of water quality standards prior to an EPA approved or established TMDL (described above), EPA proposed revisions that included new tools to ensure implementation of EPA approved or established TMDLs. EPA proposed explicit language describing the authority of EPA and States with approved NPDES programs to designate certain currently unregulated sources as discharges requiring NPDES permits. These sources would have included certain animal feeding operations, aquatic animal production facilities and silvicultural operations. The proposal stated that EPA could invoke this authority when necessary to provide reasonable assurance that an EPA approved or established TMDL would be implemented with respect to the particular source to be designated. Moreover, EPA proposed that it could invoke this authority when necessary to provide reasonable assurance that the designated source would achieve its allocated load reductions under the TMDL.

EPA also proposed explicit language describing the Agency's discretionary authority to review, object to, and reissue, if necessary, State-issued permits that are "administratively-continued" after expiration, authorizing discharges into waters that do not attain and maintain water quality standards with an EPA approved or established TMDL. EPA proposed that it could exercise this authority when necessary to ensure that those permits are consistent with applicable wasteload allocations under a TMDL.

What comments did EPA receive? The following summarizes the major comments received on the proposed new tools to ensure that established TMDLs are implemented. Several comments expressed support for EPA's authority to designate certain animal feeding operations (AFOs), aquatic animal production facilities (AAPFs), and silvicultural activities as subject to the NPDES program. Conversely, several commenters expressed their concern that additional prescriptive, command and control requirements would be counterproductive, impede economic sustainability, and stall progress already made at the local level. Some commenters added that the proposed rule would alienate the partners and cooperators with whom working relationships should be fostered. These commenters asserted that water quality improvements could instead be achieved by good locally lead, incentive-based programs, and voluntary best management practices. Some commenters noted that voluntary programs, including the CWA section 319 program, were inadequately funded and that additional resources directed to these programs would be more effective in achieving water quality goals than through additional regulatory mechanisms.

Many comments stated that nonpoint source pollution derived from agricultural and silvicultural activities should not be regulated. Several comments stated that Congress did not intend to regulate AFOs or silviculture activities under the Clean Water Act or subsequent amendments. EPA also received many comments regarding whether EPA has the authority to designate sources in NPDES-authorized States. These commenters expressed their belief that the proposal was designed to extract from States more rigorous (i.e. enforceable) "reasonable assurances" that nonpoint source load allocations will be met.

Some comments noted that the determination regarding whether or not to permit an AFO, AAPF, or silviculture activity should be based upon whether or not the operation or activity met the statutory definition of a point source rather than on case-by-case determinations. Several comments specifically addressed the definition of "point source" and emphasized that any discernible, confined and discrete conveyance falls within that definition and, therefore, all operations with such conveyances should be regulated as point sources. Other comments that addressed this same issue asserted that only those operations with a discrete, confined and discernible conveyance fall within the definition of point source and only those can thus be permitted.

The Agency received comments asserting that requiring permits on a case-by-case basis violates the due process rights of the permittee since there are no clear standards to apply and no hearing rights provided to challenge abusive decision-making regarding NPDES permitting. The comments further noted that permit decisions should be based upon fixed rules rather than on-the-spot decisions by Federal employees.

2. Designation of concentrated animal feeding operations (CAFOs)

What Did EPA Propose? EPA proposed changes to the NPDES regulations regarding the designation of concentrated animal feeding operations (CAFOs). EPA proposed explicit language describing the Agency's authority, in States with approved NPDES programs, to designate animal feeding operations (AFOs) as CAFOs. Once designated, these sources would be subject to NPDES program requirements. This designation authority, like the authority of NPDES-

authorized States and EPA in unauthorized States, would be discretionary. The proposed authority was limited to instances when EPA establishes a TMDL and determines designation is necessary to provide reasonable assurance that the TMDL will be implemented. If the Agency chose to invoke this authority, it would do so on a case-by-case basis and only in those instances where other means of working with the State were not successful.

The NPDES regulations for CAFOs first define the term "animal feeding operation" (AFO) and then the term "concentrated animal feeding operation" (CAFO). An operation must first be an AFO before it can be defined or designated as a CAFO. The term "animal feeding operation" is defined in EPA regulations as a "lot or facility" where animals "have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period and crops, vegetation forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility" See § 122.23.

Once a facility meets the AFO definition, its size, determined by the total numbers of animals confined, is a fundamental factor in determining whether it is a CAFO. The animal livestock industry is diverse and includes a number of different types of animals that are kept and raised in confined situations. To define these various livestock sectors, EPA regulations established the concept of an "animal unit" (AU) (Part 122 Appendix B). An AU varies according to animal type. One animal is not necessarily equal to one AU. The regulations assign a multiplication factor for each livestock type, except poultry.

An AFO is a CAFO either if it meets the regulatory definition of a CAFO or it is designated as a CAFO on a case-by-case basis. An AFO is defined as a CAFO where more than 1,000 AUs (as defined by the existing regulation) are confined at a facility. These CAFOs are considered "large CAFOs." In general, a medium-sized AFO where more than 300 AUs are confined at a facility is also defined as a CAFO where pollutants are discharged either into navigable waters through a manmade ditch, or directly into waters that originate outside of and pass over, across, or through the facility, or come into direct contact with the confined animals. Today's regulation does not address AFOs that are defined as CAFOs under these criteria.

As mentioned, an AFO can become a CAFO subject to NPDES permitting through case-by-case designation. See § 122.23(c). Case-by-case designations are based on a Director's determination that the operation or facility is a significant contributor of pollutants to waters of the United States. In designating an operation or facility as a significant contributor of pollutants, the Director essentially finds that the facility's discharges are more like point sources already subject to NPDES regulation than those agricultural nonpoint sources that are not. EPA regulations define the term "Director" as the EPA Regional Administrator or the State Director (in States authorized to administer the NPDES program), as the context requires, or an authorized representative. See § 122.2. This definition explains that when there is an approved State program, "Director" normally means the State Director but that in some circumstances, EPA retains the authority to take certain actions even when there is an approved State program. In the proposed rule, EPA identified designation of CAFOs and concentrated aquatic animal production facilities (CAAPFs) as instances, where the context requires, that EPA retain authority in authorized States.

In making the determination that a source is a significant contributor of pollutants to waters of the United States, the Director conducts an on-site inspection of the facility and considers the following factors: (1) The size of the animal feeding operation and the amount of wastes reaching waters of the United States; (2) the location of the animal feeding operation relative to waters of the United States; (3) the means of conveyance of animal wastes and process waste waters into waters of the United States; (4) the slope, vegetation, rainfall, and other factors affecting the likelihood or frequency of discharge of animal wastes and process waste waters into waters of the United States; and (5) other relevant factors. See § 122.23(c). One such relevant factor could be the water quality of the receiving water, including the degree of nonattainment of water quality standards.

EPA has designated AFOs as CAFOs in States where it is the NPDES permitting authority although it has done so only on rare occasions. EPA believes it should be able to designate facilities in NPDES-authorized States as well, for example, to assure implementation of an EPA-established TMDL. EPA, therefore, proposed to revise § 122.23 to include explicit language describing the Agency's authority (under certain circumstances discussed below) to make such designations in instances when the State has not already done so.

The proposed regulatory change limited the exercise of this discretion to the situation where EPA establishes a TMDL for a waterbody in an authorized State and determines that designation is necessary to provide reasonable assurance that the wasteload allocations and load allocations under the TMDL will be achieved. EPA may establish a TMDL for a State where a State fails to establish a TMDL for a waterbody in accordance with its approved schedule or where EPA disapproves a State-established TMDL. States must submit each TMDL they establish to EPA for approval. EPA is today promulgating regulations to require States to submit a plan to implement the load allocations and wasteload allocations of a TMDL. EPA will evaluate the adequacy of the implementation plan (a required element of a TMDL) in determining whether to approve a TMDL. If EPA disapproves a TMDL based on a determination that the implementation plan is inadequate EPA would then need to establish the TMDL itself, including an implementation plan.

The implementation plan must provide reasonable assurance that the control actions and/or management measures required to implement the load allocations and wasteload allocations of the TMDL will be put in place and the load allocations and wasteload allocations will be met. Thus, EPA may disapprove the TMDL if the Agency determines that the wasteload allocation or load allocation is not appropriate, or the implementation plan does not provide such reasonable assurance. For example, EPA may determine that the implementation plan lacks reasonable assurance that certain AFOs will achieve and maintain their respective pollutant load allocations. Under these circumstances, EPA proposed that it would work with the State to provide the necessary reasonable assurance. EPA might suggest to the State, for example, that certain additional management measures be put in place to control the water quality impacts from AFOs contributing to the water quality impairment necessitating the TMDL. EPA also might recommend that certain improvements be made to existing State programs, whether voluntary or regulatory, to control water quality impacts from such sources.

If working with the State to achieve reasonable assurance has failed, however, EPA proposed that it would disapprove the TMDL and thereafter establish the TMDL, including an implementation plan. Under these

circumstances, EPA proposed that the Agency may then determine that an AFO is a significant contributor of pollutants to waters of the United States. EPA may also determine that the best way for EPA to provide reasonable assurance that such feedlot pollutant sources achieve and maintain assigned pollutant load allocations is through the issuance (and enforcement) of an NPDES permit. Under the proposal, EPA could then invoke its designation authority and require the AFO to seek an NPDES permit as a CAFO.

What comments did EPA receive? In addition to the comments noted above under the section titled "What Comments Did the Agency Receive on These Proposed New Tools," the Agency received several comments specific to the proposed designation of animal feeding operations. The following discussion summarizes some of the major comments received on this provision. EPA received several comments supporting the proposed authority to designate certain AFOs. Many commenters also recommended that using its designation authority, the Agency correct NPDES-authorized States that fail to properly permit all large AFOs as CAFOs.

Many commenters, on the other hand, opposed EPA designation in NPDES-authorized States. These commenters asserted that States should have the lead in regulating AFOs and expressed concern that the proposed rule would result in increased coordination costs for Federal and State governments. Others expressed concern that EPA designation of AFOs in NPDES-authorized States would not be consistent with a State's designation authority. These commenters asserted that EPA is not required to conduct the same analysis as a State when deciding whether to require a permit.

Several comments stated that EPA could not intervene in NPDES-authorized States unless it decides to withdraw the NPDES program. Commenters stated that EPA designation in authorized States would conflict with State decisions regarding its NPDES program, for example, by overriding a State's decision not to regulate certain AFOs. One commenter expressed concern that the rule could result in inconsistent permitting decisions for similar sources located in different EPA Regions.

EPA also received comments recommending that a limit or threshold level be established for the number of small AFOs that would be designated on a case-by-case basis under this rule. These commenters suggested that such a limitation would place a cap on the potential strain to State resources caused by the inclusion of a large number of additional facilities that would be added to the NPDES program. Some comments stated that only AFOs that discharge pollutants from a point source—a discrete, confined, discernable conveyance—can be permitted whereas nonpoint source dischargers could not. Others commented that Congress only intended to regulate large AFOs.

What is EPA promulgating today? In response to comments received on the proposed rule, EPA is not taking final action on the proposed changes to the NPDES regulations applicable to AFOs and CAFOs at § 122.23.

3. Designation of Concentrated Aquatic Animal Production Facilities (CAAPFs)

What did EPA propose? EPA proposed changes to the NPDES regulations regarding the designation of concentrated aquatic animal production facilities (CAAPFs). EPA proposed explicit language describing its authority, in States with approved NPDES programs, to designate aquatic animal production facilities (AAPFs) as CAAPFs. Once designated, these sources would become subject to NPDES program requirements. This designation authority would be discretionary and if invoked, would be used on a case-by-case basis. The proposed authority was limited to instances where EPA is establishing a TMDL and the Agency determines that designation is necessary to provide reasonable assurance that the TMDL will be implemented. The Agency's purpose and basis for this action is nearly identical to the purpose and basis explained for EPA designation of CAFOs in NPDES-authorized States.

Under existing regulations, concentrated aquatic animal production facilities are subject to the NPDES program. As with AFOs, one situation in which an AAPF is considered "concentrated" and thus subject to NPDES permitting, is when the Director so designates the operation or facility on a case-by-case basis. See § 122.24(c). As with case-by-case designations of CAFOs, case-by-case designations of CAAPFs are based on a determination that the operation or facility is a significant contributor of pollutants to waters of the United States. In designating an operation or facility as a significant contributor of pollutants, the Director essentially finds that the facility's discharges are more like point sources already subject to NPDES regulation than agricultural nonpoint sources that are not.

In making the determination that an AAPF is a significant contributor of pollutants to waters of the United States, the Director conducts an on-site inspection of the facility and considers the following factors: (1) The location and quality of the receiving waters of the United States; (2) the holding, feeding and production capacities of the facility; (3) the quantity and nature of the pollutants reaching waters of the United States; and (4) other relevant factors. See § 122.24(c). The proposed regulatory change would restrict EPA's authority to exercise the discretion to designate CAAPFs to the same limiting situations for designating CAFOs, specifically, when EPA establishes a TMDL for a waterbody in an authorized State and determines that designation is necessary to provide reasonable assurance that the wasteload allocations and load allocations under the TMDL will be achieved.

In addition, the preamble to the proposed rule offered an interpretation of the distinction between "aquaculture" and "concentrated aquatic animal production facilities." Based on additional consultation, today's preamble offers a clarification to that interpretation as explained below.

What comments did EPA receive? In addition to the comments noted above under the section titled "What Comments Did EPA Receive on These Proposed New Tools," the Agency received several comments specific to the designation of CAAPFs. EPA received very few comments addressing issues relevant solely to the designation of CAAPFs. The following is a summary of those comments. One comment expressed support for the proposal but suggested that the scope of designation authority should be broadened. This commenter expressed concern that there were too many exemptions under which a facility would not be covered under the NPDES program and that the proposal should be revised to allow for designation of all CAAPFs in every instance.

Most of the comments received opposed EPA's proposal to designate certain AAPFs in those instances where other means of working with a State have failed. One commenter expressed concern that the proposal was a questionable expansion of EPA's authority to supercede current State actions that efficiently and economically regulate CAAPFs. This commenter stated that States with large aquatic production industries already have a comprehensive regulatory framework, enforcement authority and compliance assistance, as well as voluntary incentives, including operator

training and certification, complaint systems, and coordination with various State agencies.

What is EPA promulgating today? In response to comments received on the proposed rule, EPA is withdrawing the proposed changes to the NPDES regulations applicable to AAPFs and CAAPFs at § 122.24.

By today's preamble, however, EPA offers a clarification of its interpretation of the distinction between "aquaculture" and "concentrated aquatic animal production facilities." The preamble to the proposed rule differentiated between "aquaculture" and "aquatic animal production facilities" based on the location of aquatic stock confinement relative to jurisdictional waters of the United States. The proposal indicated that with respect to "aquaculture," aquatic stock is confined within jurisdictional waters whereas aquatic stock in "aquatic animal production facilities" is not confined within jurisdictional waters but the facilities discharge to jurisdictional waters. Upon closer review of the original CWA legislative history, the regulations for aquaculture and aquatic animal production facilities, and past Agency statements on the matter, EPA today clarifies the statements in the preamble to the proposed rule. As an initial matter, the Agency notes that it did not intend to amend or revise existing EPA interpretations regarding the scope of the two regulations, but merely to provide clarification for the reader. EPA regrets any confusion fostered by the proposal.

Section 318 of the CWA specifically addresses "aquaculture." The CWA does not specifically address "concentrated aquatic animal production facilities." The latter are a type of "concentrated animal feeding operation," which the CWA explicitly identifies as a "point source." The legislative history is clear that "aquaculture," as the term is used in Section 318 of the Act, is intended to refer to controlled conditions at an approved aquaculture project, i.e., innovative reuse of effluent discharged from municipal and/or industrial sources. In 1977, EPA explained that aquaculture projects were viewed as one way to put existing pollution to productive use. (42 FR 25478, May 17, 1977.) ("aquaculture projects using pollutants within navigable waters will be unique since discharges in excess of those permitted pursuant to effluent limitations are to be allowed within the project area."). When EPA proposed the aquaculture regulations in August 1978, the proposed regulatory text provided:

> The regulations are intended to authorize, on a selective basis, controlled discharges which could otherwise be unlawful under the Act in order to determine, in a carefully supervised manner, the existing and potential feasibility of using pollutants to grow aquatic organisms which can be harvested and used beneficially and to encourage such projects, while at the same time protecting the other beneficial uses of the waters.
>
> Section 125.15(b) (as proposed at 43 FR 37132 on August 21, 1978). The Agency further proposed that:
>
> These regulations do not apply to those aquaculture facilities such as fish hatcheries, fish farms, and similar projects which do not use discharges of wastes from a separate industrial or municipal point source for the maintenance, propagation and/or production of harvestable freshwater, marine, or estuarine organisms. Such projects are regulated directly as aquatic animal production facilities under section 402 of the Act.
>
> Section 125.15(c) (as proposed on August 21, 1978). The 1978 proposal was nearly identical to the aquaculture regulations then in existence under Part 115. Its purpose was to incorporate the Part 115 regulations into the NPDES permit regulations, reflecting the Agency's intent to merge aquaculture permitting into the NPDES program following changes to Section 318 in the 1977 CWA amendments. While the current regulations addressing aquaculture have changed slightly and been renumbered, the proposed regulatory text quoted above most clearly illustrates the distinction between "aquaculture" within the meaning of CWA section 318 and regulated under § 122.25, and "concentrated aquatic animal production facilities" regulated under § 122.24. Therefore, by today's final rule, EPA is clarifying that the distinction between "aquaculture" and "concentrated aquatic animal production facilities" is not based on the location of aquatic stock confinement relative to jurisdictional waters of the United States. Most commercial fish husbandry that the layperson refers to as "aquaculture," including fish farms located in waters of the U.S., is subject to NPDES regulation under the rubric "concentrated aquatic animal production facility." As with feedlots, an "aquatic animal production facility" is subject to regulation under the NPDES permitting program only if the facility is "concentrated" according to the NPDES regulations.

4. Designation of Point Source Storm Water Discharges Associated With Silvicultural Operations

What did EPA propose? The proposed regulations would have provided States authorized to administer the NPDES program and EPA with the opportunity to use the NPDES program to manage pollution from forestry operations under certain circumstances. As proposed, a State could designate a forestry operation not already subject to NPDES permit requirements, as requiring an NPDES permit only (1) where the operation includes a physical "discharge" of storm water from a discrete, confined, discernible conveyance (a physical point source); and (2) upon a determination that the operation was a "significant contributor of pollutants" or was contributing to the violation of a water quality standard. The proposal would have also provided EPA with this designation authority. The Agency's use of this authority, however, would have been limited to instances where the Agency establishes a TMDL and designation is deemed necessary to provide "reasonable assurance" that a source would meet its allocated load reductions under the TMDL.

Under the proposed regulations, pollutants from forestry operations that do not cause significant water quality problems would not be subject to the NPDES program. Even where forestry activities were causing significant water quality problems, State permitting authorities would have retained the option of determining that approaches other than the NPDES program, such as State voluntary or alternate regulatory programs, would be more effective and sufficient to restore the health of the polluted waterbody.

As proposed, where a State identifies a polluted waterbody, the State would be required to develop a TMDL to restore the water and provide "reasonable assurance" that the necessary pollution controls would actually be implemented. States authorized to administer the NPDES program would have, among others, the option to issue an NPDES permit for a point source discharge of storm water associated with a forestry operation to provide "reasonable assurance" that the pollution control measures would be implemented. EPA noted in the proposal that the Agency expected that States would use this permit option only to address "bad actors" who had not responded to various non-regulatory approaches and were not adequately implementing best management

practices to control water quality impacts.

The Clean Water Act requires that EPA review and approve TMDLs as adequate to restore the health of polluted waters. Where a State TMDL is not adequate and EPA disapproves the TMDL, EPA is required to establish the TMDL. In cases where EPA establishes a TMDL that identifies silvicultural activities as a significant source of pollutant loadings, the Agency proposed that it would work with the States and rely on voluntary, incentive-based approaches, where such approaches are proven to be effective, to provide reasonable assurance that the loads and wasteloads allocated in the TMDL would be achieved. Where working with the State did not prove successful, the proposed regulations would have allowed EPA to designate, as a point source discharge, the addition of pollutants from forestry activities that discharge storm water through a discrete, confined, discernible conveyance. As discussed in the preamble to the proposed regulations, EPA expected that the Agency would use this authority only as a last resort. To accomplish this objective and achieve the intended result in the least burdensome fashion, EPA proposed changes to the silviculture and storm water permit provisions at §§ 122.27 and 122.26.

Forests have a significant role in protecting the quality of our Nation's waters. Covering about one-third of the Nation's land area, forests are the source of about two-thirds of the Nation's runoff, excluding Alaska. Vegetated forested lands help to dissipate rain, reduce flooding and slow storm water runoff. In addition, forested lands help to refill underground aquifers, cool and cleanse water, and provide critical habitat for fish and wildlife. Forests also improve our quality of life by providing abundant recreational opportunities.

EPA recognized that implementing properly designed forest management plans can result in silvicultural activities that are both profitable and protective of water quality. These plans can be designed to include mechanisms that would accommodate the full range of forestry activities that might otherwise pollute waters (*e.g.*, by designating special areas for protection; planning the proper timing of forestry activities; describing best management measures for road layout, design, construction, and maintenance; and identifying the most appropriate methods for harvesting and forest regeneration). EPA also recognized that in many parts of the country, Federal agencies, States, and professional forest managers are implementing effective forest management plans combining a range of tools including education, financial assistance, and regulatory requirements.

Despite these public and private forest management efforts, silvicultural activities may yet contribute to water quality impairments and aquatic habitat loss (*e.g.*, when operators resist such forest management efforts or when forest management efforts become outdated or unresponsive to current conditions). Impairments and habitat loss may occur due to sediment and nutrient pollutant loadings, adverse impacts to runoff and infiltration patterns, and water temperature increases. Discharges due to improper road design, location, maintenance and use also can impair aquatic ecosystems and result in physical alterations in stream channel morphology and substrate composition, stream bank destablization, changes in flow regime, habitat fragmentation, etc. ("Environmental Assessment to the Interim Rule: Administration of the Forest Development Transportation System: Temporary Suspension of Road Construction and Reconstruction in Unroaded Areas," February 1999, USDA Forest Service). Sedimentation due to uncontrolled discharges from silviculture activities, for example, discharges from forest road building, threatens water quality and important aquatic habitat.

In 1998, 32 States identified forestry as a source of water quality problems that affect more than 20,000 miles of rivers and streams, 220,000 acres of lakes, and 15 square miles of coastal waters. This data was derived from an unpublished analysis using data from the 1998 section 303(d) lists and the CWA section 305(b) reports. The Agency believes that these numbers underestimate the number of waters impaired by forestry operations due to a number of data limitations.

EPA proposed changes to the NPDES regulations for silviculture and for storm water discharges in order to address this potential source of significant impairment. Most discharges of storm water associated with road building and other land disturbing activity that disturbs more than five acres of land are currently regulated under the NPDES permitting program pursuant to the NPDES permit regulations for storm water discharges at § 122.26. EPA published the storm water discharge application regulations in 1990. After promulgation of those regulations, and in discussions with stakeholders, it became clear to EPA that, at a minimum, there was a perception of a "gap" in regulatory treatment of silviculture roads compared to all other types of roads. This regulatory gap arose based on the NPDES regulation addressing silvicultural sources which identified, among other things, silvicultural "road construction and maintenance from which there is natural runoff" as a nonpoint source silvicultural activity.

The Agency believes that it acted within its delegated authority when it proposed to remove this sentence from the regulation. EPA proposed that, under limited circumstances, when a silvicultural activity results in a "physical" point source discharge that can and should be regulated under NPDES permits, like those for other storm water discharges, States and EPA should have the option of using the NPDES program as a means to address the water quality impacts from a significant remaining, unregulated source of pollutants causing adverse impacts to water quality. Specifically, the Agency believed that this option should be available to address those sources that are doing a poor job of implementing measures designed to prevent water quality problems.

The proposal would have provided all NPDES permitting authorities with sufficient authority to regulate "physical" point source discharges from silvicultural sources not already subject to NPDES permit requirements. Again, the Agency hastens to note that the existing limitation on regulation of discharges from silvicultural sources was not compelled by the CWA. EPA promulgated the existing regulation on silviculture based on the interpretive authority for rulemaking under CWA section 501(a), which authorizes the Administrator to prescribe regulations that are necessary to carry out her functions under the Act. The CWA preserves the rights of States to experiment with alternative regulatory (and non-regulatory) approaches to control nonpoint sources of pollution. The CWA does not provide specific legal authority for EPA to regulate nonpoint sources in a way that would assure the attainment of water quality standards. Such authority is reserved for the States.

Under the proposed rule, EPA would have deleted a sentence from the existing NPDES regulations that identifies a series of nonpoint source silvicultural activities (§ 122.27(b)(1)). While most such activities, in fact, can result in diffuse runoff (*i.e.*, a nonpoint source of pollutants), some discharges from some silvicultural activities may physically resemble point source discharges. As early as 1976, the Agency

struggled to articulate a general definition for the term nonpoint source. (41 FR 24709, 24710 col.2, June 18, 1976). There was, and perhaps remains, however, no precise and absolute definition. *Id.* In the 1976 preamble, EPA relied on three criteria to characterize nonpoint sources: Pollutants discharged are induced by natural processes; pollutants discharged are not traceable to any discrete or identifiable facility; and pollutants discharged are better controlled through the utilization of BMPs, including process and planning techniques. As evidenced by implementation of the NPDES permitting program for storm water discharges associated with construction, the first and third of these criteria are probably less meaningful in the current context of silvicultural road building and maintenance.

As explained in the preamble to the proposed rule, EPA premised the existing silviculture regulation (at § 122.27) on a judicial decision that held that EPA could not exempt any point sources from the NPDES permitting program. *See Natural Resources Defense Council, Inc.* v. *Costle,* 568 F.2d 1369 (D.C. Cir. 1977). EPA interprets the 1987 storm water amendments in CWA section 402(p)(1) to essentially supercede this judicial finding and create a new category of "unregulated point sources." In place of this regulatory gap from permitting for silvicultural discharges, the proposed rule would allow for case-by-case regulation of a new category of "unregulated point sources" associated with the silvicultural activities that are currently unregulated under the NPDES program. Note that "return flows from irrigated agriculture" and "agricultural storm water" are "statutory" nonpoint sources (based on CWA section 502(14)). As such, EPA can not and would not attempt to regulate those statutory nonpoint sources under the NPDES permitting program. The Agency emphasizes that the proposal would have affected only those currently unregulated silvicultural activities that cause "physical" point source discharges. As discussed previously, except for some CAFOs, a term specifically included in the definition of "point source," the NPDES permit requirement only applies when a particular source has the "physical characteristics" of a point source discharge. As a threshold matter, regulation as a point source requires a "discrete, confined, and discernible conveyance." CWA section 502(14), 33 U.S.C. section 1362(14).

In the 1987 amendments to the CWA, Congress established a general moratorium against permitting discharges composed entirely of storm water in CWA section 402(p)(1). As such, the section created the category of "unregulated" point sources of storm water described above. Unregulated point sources of storm water are point sources to which the NPDES permitting program does not apply. CWA section 402(p)(2) identified discharges that are *not* subject to the moratorium, including discharges from municipal separate storm sewer systems serving populations over a certain size, as well as storm water discharges associated with industrial activity.

Of particular interest, CWA section 402(p)(2)(E) specifically identifies a category of discharges—other than municipal or industrial storm water discharges—that can be regulated on a case-by-case at some future time. EPA regulations that implement section 402(p)(2)(E) are found at § 122.26(a)(1)(v). Section 402(p)(2)(E) is the basis and the only basis, upon which physical *point source discharges* from the currently unregulated silvicultural activities would be required to obtain an NPDES permit. Designation under section 402(p)(2)(E) is only available for point sources. The sentence in EPA's current silviculture regulation that identified nonpoint source discharges from silvicultural activities enabled inconsistent interpretations regarding whether discharges from such activities, which otherwise would appear to add pollutants from a discrete, confined, discernible conveyance, could be designated under section 402(p)(2)(E). EPA proposed deletion of this sentence to clarify the circumstances when such sources can and should be regulated under the NPDES permitting program for storm water discharges.

As noted above, the reason EPA proposed to remove the sentence describing silvicultural nonpoint sources was to provide States with an additional tool to manage water quality impacts from these sources as well as to ensure that EPA could implement a TMDL that the Agency might be required to establish in the event of State default. Accordingly, the proposed rule would have imposed a restriction on EPA that would not exist for States. Specifically, the Agency could not have designated discharges from currently unregulated silvicultural activities except in instances where EPA must establish a TMDL. This additional tool would be provided to NPDES-authorized States and to EPA under the combination of the existing storm water regulations which allow for case-by-case designation of certain storm water discharges at § 122.26(a)(1)(v) and by amending the silviculture regulations at § 122.27.

EPA notes that it did not provide an accurate cite for one of the documents cited in the proposal that described the impacts of silviculture on water quality. The Agency did not intend to misrepresent the views of the authors of the cited publication. EPA erroneously cited the wrong document authored by one of the same authors of a document in the same year (1989). The paper that the Agency intended to cite is titled, "An Overview of Nonpoint Source Pollution in the Southern United States" authored by Neary, D.G., Swank, W.T., Riekerk, H., which was published in "Proceedings of the Symposium: Forested Wetlands of the Southern U.S.," July 12–14, 1988, Orlando Fl., U.S. Forest Service. General Technical Report SE–50, published January 1989.

The proposed rule contained the statement, "silviculture contributes approximately three to nine percent of nonpoint source pollution to the Nation's waters." EPA meant to state that, based on State assessments reported in the 1988 section 305(b) Report to Congress (EPA Document #440–4–90–003), three to nine% of assessed rivers are impaired by silviculture. The Neary *et al.* document that the Agency intended to cite supports this statement. This document contains the statement that, "except for two [of the reported] states, (Arkansas and Louisiana), silviculture was responsible for <8% of the impacts on surface waters." This number falls within the range reported by the States in the 1988 section 305(b) report.

What comments did EPA receive? In addition to the comments noted above under the section titled "What Comments Did EPA Receive on These Proposed New Tools," the Agency received many comments specific to the designation of silvicultural activities. The following discussion summarizes these comments. An overwhelming number of commenters had a basic misunderstanding of what the Agency proposed. These commenters misinterpreted the proposal to mean that, upon promulgation of the rule, each and every existing and future silvicultural operation would be required to obtain an NPDES permit. Based on this misunderstanding, these commenters also misunderstood the proposal as a mechanism that would unfairly and unnecessarily regulate even those operators that are adequately implementing appropriate measures to protect water quality. As discussed above, the scope of the proposed authority was much narrower, it only

applied in very limited circumstances, and would have been a mechanism to address bad actors only.

Several commenters claimed that obtaining and issuing NPDES permits would be an economic burden to the forestry industry as well as the government and that the money to obtain and issue these permits would not be well spent because it would not produce a meaningful change in water quality. Claiming that forestry has been reported as only a minor source of water quality pollution, commenters further claimed that EPA lacks the data to support this regulatory change. Commenters also asserted that the economic analysis to the proposal underestimated the costs to landowners of obtaining an NPDES permit. Many commenters expressed their belief that existing regulatory and voluntary State Forest Management programs are adequate to manage the environmental impacts from silviculture and that the proposal, if finalized, would undercut these programs.

A significant number of commenters asserted that EPA lacks the authority to make the proposed regulatory changes. These commenters disagreed with the Agency's position that the CWA provides adequate statutory authority to make these revisions. Several commenters stated that EPA did not have the authority to redefine general silvicultural practices as point sources unless there was an associated conveyance. Other commenters argued that EPA cannot and should not shield sources with discharges from discrete, discernible, confined conveyances from NPDES permit requirements. These commenters asserted that all sources with discharges from discrete, discernible, confined conveyances are and should be required to obtain NPDES permits. EPA also received a significant number of comments that asserted that EPA does have the statutory authority to make these regulatory changes. These commenters pointed out that in the absence of clear statutory language excluding silvicultural activities from the definition of a point source, EPA has the authority to regulate them as point sources. These commenters also highlighted the court decision in *NRDC* v. *Costle,* where the U.S. Court of Appeals for the D.C. Circuit explicitly held that "the power to define point and nonpoint sources is vested in EPA." 568 F.2d at 1382.

The Agency received numerous comments in support of the proposed authority to designate certain silvicultural operations as requiring NPDES permits. Several commenters provided data and case examples describing the need to permit silvicultural activities including data describing the adverse impacts to water quality from increased sediment loadings, road construction and the use of herbicides. Many commenters stated that the proposed authority was too restrictive to provide meaningful environmental results. These commenters encouraged EPA to expand designation authority to allow EPA to designate a source outside of the context of a TMDL and to expand the authority to apply universally to sources discharging into any water of the United States.

Many commenters encouraged EPA to require NPDES permits for all silvicultural operations that discharge pollutants from a point source to waters of the United States as opposed to the proposed case-by-case approach. Several commenters expressed their concern that the proposed case-by-case designation authority was retroactive in effect because designation was limited to instances where the State or EPA had already determined that the operator is a significant contributor of pollutants or contributes to a violation of water quality standards. These commenters supported a more proactive approach that would place less of a burden on the State or EPA. To preserve unspoiled waters, many also suggested that the authority be available to the State or EPA to designate sources currently located on these waters and those sources that wish to locate on these waters in the future.

Commenters expressed their concern regarding the potential for citizens to petition the State or EPA to issue an NPDES permit to silviculture operators. They were concerned that citizen suits would be costly and cause significant delays in operation. Conversely, some commenters supported the ability for citizens to use the petition process so that citizens can help to identify silvicultural operations that are causing significant water quality problems. Others expressed concern that sources undergoing land clearing activities incidental to activities such as farming or construction and development would claim that they are conducting silvicultural activities and therefore would be exempt from NPDES permit requirements (unless and until designated).

Some commenters asserted that the proposed requirement would override State control over land use decisions. These commenters asserted that requiring an NPDES permit constituted a Federal "taking" of a private landowner's use of property. Commenters also suggested that States (and the sources within States) that have effective and adequately protective forestry programs should be exempt from the effects of the proposed provisions. These commenters suggested that EPA develop reporting criteria that allow for a reasoned determination of whether a State is demonstrating the level of effort sufficient to warrant a determination that its forestry program provides "reasonable assurance" that water quality will be protected.

What is EPA promulgating today? In response to comments received on the proposed rule, EPA is not taking final action in today's rule on the proposed changes to the NPDES regulations applicable to silviculture at §§ 122.26 and 122.27. EPA has no plans at present to repropose changes to the silviculture exemption or to finalize the August 1999 proposal, but will continue to evaluate how to best address the water quality impacts from forestry.

5. EPA Authority To Reissue Expired and Administratively-Continued NPDES Permits Issued by Authorized States

What did EPA propose? As discussed in Section III.A.3, Reasonable Further Progress Toward Attaining Water Quality Standards in Impaired Waterbodies in the Absence of a TMDL, of this preamble, EPA proposed to grant the Regional Administrator the discretion to trigger the objection procedures of § 123.44 to ensure that established TMDLs are, in fact, implemented.

What comments did EPA receive? The comments received on this proposal are discussed in III.A.3, Reasonable Further Progress Toward Attaining Water Quality Standards in Impaired Waterbodies in the Absence of a TMDL above.

What is EPA promulgating today? After carefully considering all of the comments EPA received on the proposed mechanism and considering further the purpose underlying the authority, EPA is today promulgating proposed § 123.44(k) as reflected in today's **Federal Register**. A discussion of EPA's authority to review, object to, and reissue State-issued NPDES permits that have been administratively-continued authorizing discharges to impaired waters is contained in Section III.A.3. of this preamble and below. The scope of this provision is consistent with what the Agency proposed on August 23, 1999 except as discussed below. The Regional Administrator will generally have the discretionary authority to review, object to, and reissue, if necessary, environmentally-significant State-issued NPDES permits

that have been administratively-continued after expiration. An environmentally-significant permit authorizes a discharge to a waterbody that does not attain and maintain water quality standards where there is a need for a change in the existing permit limits to be protective of water quality standards.

The availability of this authority is important for permits that authorize discharges of pollutant(s) of concern to waterbodies where a TMDL has been established but not implemented through permits. Under these circumstances, the availability of this authority for these permits is important because they do not contain limits and/or conditions that are consistent with applicable wasteload allocations established in a TMDL. In response to comments supporting the proposal and suggesting that EPA commit to action more strongly, EPA has modified the proposed rule as it relates to the operation of the provision after the establishment of a TMDL. In § 130.32(c)(1)(ii) of today's rule, EPA commits to exercise its authority to act on expired State-issued permits (when State law "administratively continues" the expired permit) to ensure the incorporation of effluent limitations (based on the wasteload allocation(s) in a TMDL) into the NPDES permit. EPA commits to exercise this authority to ensure that such limits are incorporated into the permits within two years from the expiration of the permit term, or, when the permit term expired prior to the establishment of the TMDL, within two years from the establishment of the TMDL. In order to ensure that these limits are incorporated into the permits, EPA intends to monitor the State's progress in incorporating the appropriate limits into the permits within one year after the permit expires or, when the permit expired prior to establishment of the TMDL, within one year of establishment of the TMDL. In accordance with the new provisions of § 130.32(c)(1)(ii), if EPA concludes that the State will not issue the permit within the applicable timeframe, with the appropriate limits, EPA will trigger these review and objection procedures. These provisions apply only to TMDLs approved after the effective date of today's rule.

Implementation plans for TMDLs (described in the revisions to Part 130 elsewhere in today's **Federal Register**) need to contain a schedule for reissuing or revising relevant NPDES permits as expeditiously as practicable in order to incorporate effluent limits consistent with the wasteload allocation(s) in the TMDL. Where EPA is the NPDES permitting authority, EPA must reissue or revise the permits within two years after the establishment of the TMDL. EPA will rely on existing regulations at § 122.62(a)(2) as a basis to modify permits during their term to revise existing WQBELs or incorporate new WQBELs to implement the wasteload allocation(s) in the TMDL (which, in turn, implement existing water quality standards). EPA explained the operation of § 122.62(a)(2) in an earlier rulemaking preamble. (45 FR 33290, 33315 col. 1, May 19, 1980). A TMDL that implements a water quality standard where that water quality standard was in existence at the time of permit issuance represents "new information" that did not exist at the time of permit issuance. This justifies new permit requirements to implement those standards. [**Note:** Where a TMDL implements a water quality standard and that water quality standard is revised or issued after the issuance of a permit, the applicable regulation would be § 122.62(a)(3) rather than (a)(2). Thus, modification of the permit prior to expiration would not be authorized unless (A) the permit condition to be modified was based on EPA approved or promulgated water quality standards, (B) EPA has approved a State action with regard to the water quality standard on which the permit condition was based and (C) the permittee requests modification in accordance with § 124.5 within 90 days of the **Federal Register** notice of the action on which the request is based.]

The Agency believes that this mechanism is necessary to support the goals of the CWA to attain and maintain water quality standards. The Agency further believes that this authority is necessary to facilitate the fulfillment of EPA's statutory responsibility to ensure timely establishment and implementation of TMDLs and to ensure that permits include water quality-based effluent limitations that will enable the waterbody to meet the applicable water quality standards. CWA sections 303(d) and 301(b)(1)(C). The wasteload allocations derived from the TMDL provide the basis for the water quality-based effluent limitations that permits must contain. EPA has concluded that the time frames discussed above are necessary to ensure timely TMDL implementation.

IV. Costs of the Rule

The incremental costs associated with today's rule are contained in "Analysis of the Incremental Cost of Final Revisions to the Water Quality Planning and Management Regulation and the National Pollutant Discharge Elimination System Program". **You should read that document for a complete description of the cost estimates and the basis for those estimates.** The following is a summary from that report.

Revision to the current program	Annualized cost (2000 $ in millions/yr)
Revisions to the listing requirements	$0.066
Revisions affecting the content and development of TMDLs	13.708
Revisions requiring TMDLs to be developed within 10 years	9.030
EPA reissuance of state-issued expired and administratively continued permits	0.078
Total annualized cost	$22.882

For the Water Quality Planning and Management Rule (changes to part 130), EPA estimated the incremental costs that will accrue from today's regulation over the period from 2000 through 2008. This period of analysis was chosen because it spans a 10 year period, the full time during which most TMDLs will be developed for waterbodies included on the 1998 section 303(d) lists of impaired waters. Today's final rule allows States, Territories, and authorized Tribes up to 2010 to establish all the TMDLs for waterbodies included on the 1998 section 303(d) list; therefore, the actual costs may be lower than estimated. The incremental costs that are analyzed are the additional requirements of today's rule above the current requirements associated with developing all the section 303(d) lists and all the TMDLs that will be completed during this period. In accordance with today's rule, section 303(d) lists will be developed in 2002, in 2006, and in 2010. During this period, all TMDLs will be developed for waterbodies on the 1998 lists, most of the TMDLs will be developed for waterbodies newly listed in 2002, some of the TMDLs will be developed for waterbodies newly listed in 2006, etc.

As shown above, the net annualized cost that is attributable to the revisions to the listing requirements over and above the current program amounts to about $0.066 million. This reflects the net of the additional cost attributable to the listing requirement (about $0.229 million) offset by the annualized savings associated with extending the listing cycle from two years to four years (about $0.163 million). The additional cost of revised requirements for developing TMDLs is estimated to be about $13.708 million annually for the TMDLs that will be developed for waterbodies on

the 1998 303(d) list. For perspective, these additional costs represent about a 9% increase in the baseline costs of developing these TMDLs as required under the current program prior to the revision of the Water Quality Planning and Management Rule. Finally, the revised requirements are expected to result in accelerating the development of about 17% of the TMDLs for the 1998 section 303(d) lists. The additional cost associated with developing these TMDLs on a more rapid schedule than would have occurred in the baseline is estimated to be about $9.03 million annually through 2008.

For the provision in the new regulation affecting the NPDES program (parts 122, 123, and 124), EPA estimated the incremental costs relating to EPA reissuing expired State-issued and administratively continued permits where necessary to implement a TMDL. The analysis of the incremental costs of the NPDES program revision is limited to the incremental costs that the regulation will impose in connection with waterbodies on the current section 303(d) list and associated sources. TMDLs for waterbodies on the 1998 section 303(d) lists are assumed to be developed during the period from 2000 through 2008.

As shown above, the total annualized cost associated with the provision is estimated to be $0.078 million per year. Costs to State and Federal permit authorities include the additional permitting and evaluation burdens associated with the proposed revision. The annualized costs shown above reflect all costs projected to be incurred from 2000 onward and are presented in March 2000 dollars.

V. Regulatory Requirements

A. Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions. For purposes of assessing the impacts of today's rule on small entities, a small entity is defined as: (1) A small business according to the RFA default definition for small business (based on the Small Business Administration size standards); (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. For purposes of the RFA, States, Territories and tribal governments are not considered small government jurisdictions since they are independent sovereigns.

After considering the economic impacts of today's final rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This final rule will not impose any requirements on small entities. Today's rule established requirements applicable only to EPA, States, Territories, and authorized Tribes. Thus, EPA is not required to prepare a regulatory flexibility analysis.

Court decisions make it clear that the RFA imposes no obligation on an agency to prepare a small entity impact analysis of the effect of a rule on entities which the rule itself does not regulate. Rules which do not regulate small entities directly—rules which affect the decisions made by other regulators for example—do not require an analysis of such effects. Therefore, the key issue in deciding whether EPA must prepare a regulatory impact analysis here is whether today's rule will "regulate" small entities. Court decisions provide further guidance on when, for purposes of triggering the RFA requirement, a small entity is not subject to a rule or not regulated by a rule.

For example, the U.S. Court of Appeals for the District of Columbia Circuit has determined that the Federal Energy Regulatory Commission (FERC) was not required to analyze the effects of two rules on small entities that were not subject to the requirements of the rules. In the first case, the rule had the effect of increasing the rates that electric utilities could charge their wholesale customers for electricity. The agency certified that the rule would not have a significant impact on a substantial number of small entities because virtually none of the utilities it regulated were small entities. Challengers to the agency argued that the RFA applied to all rules that affect small entities, whether the small entities are directly regulated or not. In their view, therefore, FERC should have considered the effect of the rule on customers of the electric utilities subject to rate regulation by FERC. The court disagreed, finding that under the RFA, an agency may properly certify that no regulatory flexibility analysis is necessary when it determines that the rule will not have a significant economic impact on a substantial number of small entities *that are subject to the requirements of the rule.* "Congress did not intend to require that every agency consider every indirect effect that any regulation might have on small businesses in any stratum of the national economy." *Mid-Tex Elec. Coop., Inc.* v. *FERC,* 773 F.2d 327, 342 (D.C. Cir. 1985).

In the second FERC case, the court reaffirmed this earlier conclusion. In this case, the rule regulated the rates natural gas pipeline company charged local gas distribution companies for the sale (or transportation) of natural gas purchased by them. Under its enabling statute, FERC had no jurisdiction to regulate the local distribution of gas, only the interstate sale and transportation of natural gas. The local distribution companies argued that the rule would have a significant economic impact on them as customers of the regulated utilities. The court again held that no analysis is required when the agency determines the rule will not have a substantial economic impact on the small entities subject to the rule. FERC had no obligation to prepare an analysis of the economic effects of a rule on small entities which the rule itself did not regulate. *United Distribution Company* v. *FERC,* 88 F.3d 1105, 1048 (D.C. Cir. 1996).

In addition, there are also a number of cases that have addressed EPA's obligation under the RFA when proposing and promulgating Clean Air Act (CAA) rules. The D.C. Circuit sustained EPA's certification of a rule establishing Federal automobile on-board emissions diagnostic devices. The rule allowed automobile manufacturers to comply with Federal requirements by complying with certain California regulations. EPA certified that the rule would not have a substantial economic impact on a significant number of automobile manufacturers. Businesses that manufacture, rebuild and sell car parts to replace the parts installed by the original manufacturers challenged EPA's failure to consider the effect of the rule on their businesses. The court held that, because the rule did not subject the car parts market itself to regulation, EPA was not required to prepare a flexibility analysis as to small businesses dealing in car parts. EPA only was obliged to consider the impact of the rule on small automobile manufacturers subject to the rule. *Motor & Equipment Mfrs, Ass'n* v. *Nichols,* 142 F,3d 449, 467 (D.C. Cir. 1998).

Recently, the D.C. Circuit determined that EPA properly certified that its revisions to the ozone and particulate national ambient air quality standards (NAAQS) would not have a significant economic impact on a substantial number of small entities. Under the CAA, EPA must promulgate NAAQS and State must then adopt State Implementation Plans (SIPs) providing for the implementation, maintenance and enforcement of the standards. 42 U.S.C. § 7410(a)(1). The NAAQS themselves impose no regulation upon emission sources. Rather, the States regulate sources of emissions through the SIP. EPA may call for revisions to SIPs if EPA finds that the SIP is inadequate to meet the NAAQS or to otherwise comply with the CAA. 42 U.S.C. § 7410(k)(5). Only if a State does not submit a SIP that complies with CAA requirements must EPA adopt an implementation plan of its own.

The court held that EPA correctly determined that the NAAQS will not directly affect small entities because EPA has no authority to impose any burden upon such entities. The States have broad discretion in determining the manner in which they will achieve compliance with the NAAQS. The court concluded that the possible effects of the NAAQS on small entities were no different from the indirect effects on wholesale customers not subject to regulation in Mid-Tex. In the court's view, because States must submit SIPs that will achieve compliance with the NAAQS does not render small entities potentially regulated by the States "subject" to the NAAQS for RFA purposes. The court concluded that the States" nearly complete discretion in determining which entities would bear the burden of achieving the NAAQS made these entities not subject to regulation by EPA. *American Trucking Associations* v. *EPA*, 175 F. 3d 1027, 1044–45 (D.C. Cir. 1999).

More recently, the D.C. Circuit determined that a CAA rule which would require States to develop, adopt and submit revisions to SIPs to achieve required reductions in air emissions does not regulate small entities because it leaves to the States the task of determining how to obtain the reductions, including which entities to regulate. EPA does not tell States how to achieve compliance with required air quality levels. Rather, EPA merely provides the levels to be achieved by *state-determined* compliance mechanisms. Under the CAA, States retain the power to determine which sources are burdened by regulation and to what extent. The rule leaves the control measures selection decision to the States. The rule in question did not directly regulate individual sources of emissions and therefore would not establish requirements applicable to small entities. Therefore, the court concluded that EPA properly certified the rule under section 605(b) of the RFA. *State of Michigan* v. *EPA*, 2000 WL 18.0650, p. 56 (D.C. Cir. Mar. 3, 2000).

In today's regulations, EPA is adopting changes to its water quality planning and management regulations and the NPDES permitting program. In the case of its planning and management regulations, these amendments modify requirements of EPA's current TMDL program. The second area addressed by these changes is EPA's NPDES permitting program, where EPA is adopting provisions which require EPA to step in and reissue NPDES permits in authorized States where the State has failed to take certain actions required under the regulations.

The Agency received numerous comments asserting that today's rule will have a direct, adverse impact on small governments and small businesses such as farmers and landowners, and that EPA has not met the requirements of the Regulatory Flexibility Act because it did not prepare a regulatory flexibility analysis. EPA disagrees with this conclusion for the reasons explained in sections 1 and 2 that follow. More detailed analysis is presented in the economic assessment document.

1. Changes to the TMDL Program

The changes to EPA's listing and TMDL regulations do not directly regulate individual dischargers and therefore do not establish requirements applicable to small entities. As such, certification is proper.

Under section 303(c) of the CWA water quality standards program, States, Territories, and authorized Tribes must adopt water quality standards for their waters that must be submitted to EPA for approval. These State, Territorial, or Tribal standards (or EPA-promulgated standards in the absence of EPA-approved State, Territorial, or Tribal standards) are implemented through various water quality control programs including the NPDES program that limits discharges to navigable waters in compliance with an EPA permit or permit issued under an approved State or Tribal NPDES program. The CWA requires that all NPDES permits include any limits on discharges that are necessary to meet State or Tribal water quality standards. A State or Tribe has discretion in deciding how to achieve compliance with its water quality standards and in developing discharge limits as needed to meet the standards. For example, in circumstances where there is more than one discharger to a waterbody that is subject to a water quality standard, a State or Tribe has discretion in deciding which dischargers will be subject to permit discharge limits necessary to meet the revised standards and whether and how such limits will be distributed among the discharges.

Section 303(d) of the CWA requires States, Territories and authorized Tribes (and, under certain circumstances, EPA) to establish lists of waterbodies where water quality does not meet applicable State, Territorial or Tribal water quality standards even after application of technology-based effluent limitations on point source dischargers. States, Territories and authorized Tribes (and EPA in some cases) must also develop TMDLs for those waterbodies with reference to criteria contained in those water quality standards.

Today's final regulation amends certain provisions of EPA's existing water quality management and planning regulations dealing with the listing of impaired waters and TMDL requirements. The regulation establishes new requirements for the listing program and requires schedules for completing TMDLs. Further, the rule establishes new requirements for the content and development of TMDLs, including development of an implementation plan as a required element of a TMDL, and also includes new public participation elements. (See Section II of the preamble for a full discussion of these specific changes). These new requirements allow States, Territories and authorized Tribes to tailor their water quality programs to address the characteristics, problems, risks and implementation tools available in individual watersheds, with meaningful involvement from stakeholders in the local community, by using a TMDL to align implementation under current programs. These final rules apply only to EPA, States, Territories and authorized Tribes and do not impose specific listing or TMDL development requirements upon any small entities. Under today's rule, EPA is not requiring or ordering any group of small businesses or government to change their method of operation/practices in any prescribed way.

Even if future listing or TMDL actions ultimately may have some discernable effect on small entities, such impacts would actually arise from requirements already established under section 303(d) of the CWA and the States', Territories' and authorized Tribes' water quality

standards as described above, and not directly from these final regulatory amendments. Independent of today's final amendments, States, Territories and authorized Tribes (and, under certain circumstances, EPA) already have an obligation to list waterbodies and to calculate and apportion TMDLs and their component load and wasteload allocations necessary to implement the State, Territorial, and authorized Tribal water quality standards. Today's final rule merely amends EPA's existing regulations implementing those statutory requirements. Therefore, any potential impacts to small entities result from the independent statutory obligation to establish TMDLs that implement the State, Territorial and authorized Tribal water quality standards, and not from these final regulatory requirements.

Moreover, any potential future effect on small entities that may result from State, Territorial or Tribal action in establishing TMDLs or changing current TMDLs as a consequence of adoption of today's regulation is not directly attributable either to the new or even existing TMDL rules. TMDLs are not self-implementing. They require State, Territorial and Tribal decision to implement them. Under the CWA and EPA's regulations, TMDL wasteload allocation do not automatically translate into NPDES permit limitations for point sources nor do they necessarily apply without modification to non-point sources. State, Territorial and Tribal authorities retain discretion in how they apportion wasteload allocations. Under EPA's NPDES permitting rules, effluent limits in point source permits must be "consistent with" (but not necessarily identical to) wasteload allocations in approved TMDLs. With respect to nonpoint sources, the load allocations in a TMDL are only "enforceable" to the extent State, Territorial, or authorized Tribes chose to bind themselves to these allocation. A State, Territory, or EPA decision to allocate load reductions to nonpoint sources does not bring that operator into a permit or regulatory program. Instead, implementation of the load allocation would be based on current State and local mechanisms, including implementation of State/local nonpoint source programs, and other voluntary and incentive-based actions. There are no Federal requirements that such load allocations must be met by small (or any other) entities.

2. Changes to the NPDES Permitting Program

Today's final rule also amends the NPDES program regulations to require EPA, in certain circumstances, to reissue state-issued permits that have not been reissued following the expiration of their 5-year term. Where water quality standards (or applicable effluent limitations guidelines) change during a permit term, the permittee generally is protected during the permit term against new or more stringent permit conditions necessary to implement the new water quality standards or effluent limitations guidelines, until a new permit is issued. In most cases, permittees submit timely applications for renewal and permitting authorities reissue these permits in a timely manner. In some cases, authorized States may not reissue NPDES permits at the end of their 5-year term as is currently required, and the existing permits continue in effect under general principles of administrative law. (Administrative continuance protects the permittee who has submitted a timely application for renewal from being penalized for discharging without a permit.)

This final rule requires EPA to reissue a State issued permit that has expired in those cases where the State has not reissued the permit within two years from expiration. EPA's exercise of this authority is limited to circumstances in which a permit authorizes discharges to impaired waterbodies or the permit does not currently contain limits consistent with an applicable waste load allocation in an EPA approved or established TMDL. In addition, where a State permit has expired prior to the establishment of the TMDL, the regulations require EPA to exercise its authority to reissue the permit within two years from the establishment of the TMDL if the State has not acted. While EPA expects that authorized States will expeditiously reissue permits after they have expired with the required water quality-based effluent limits (because CWA section 402 allows a maximum five year permit term), where States do not reissue such permits, EPA would use this new authority to issue such permits in a timely manner.

This provision also would not impose any additional costs on dischargers, including small entities. This is because as a matter of law, the discharger's new permit, when issued, already must include any applicable new or more stringent conditions. Therefore, the effect of the change is, at most, to accelerate the timing of reissuing expired permits such that they contain the legally-mandated new or more stringent conditions. Consequently, EPA has concluded that adoption of a rule to authorize future action by EPA would not result in the imposition of any new costs on small entities.

B. Regulatory Planning and Review, Executive Order 12866

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or Tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a "significant regulatory action." As such, this action was submitted to OMB for review. Changes made in response to OMB suggestion or recommendations will be documented in the public record.

A detailed presentation and discussion of the costs and impacts of today's amendments to the TMDL and NPDES programs, and the methodologies used to assess them, are included in the document "Analysis of the Incremental Costs of Final Revisions to the Water Quality Planning and Management Regulation and the NPDES Program Regulation", which is available in the docket for the final rulemaking. In addition, the Agency is preparing a supplemental cost and benefit analysis of the current TMDL program with publication planned in the near future.

C. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, Tribal or local governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal Mandates" that may result in expenditures to State, local, and Tribal governments, in the

aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

EPA has determined that today's rule contains no Federal mandates (as defined by the regulatory provisions of Title II of the UMRA) for State, local, or Tribal governments or the private sector. The rule does not impose enforceable duties on any State, local or Tribal government or the private sector. If a State, territory or authorized tribe chooses not to implement this regulation, in whole or in part, EPA cannot compel or enforce compliance. Rather, EPA must undertake the actions the State, Territory, or authorized tribe has declined to implement.

As described in detail previously, the total incremental cost associated with today's rule is not expected to exceed $22.88 million in any one year, and therefor does not exceed the $100 million threshold of UMRA. Thus, today's rule is not subject to the requirements of sections 202 and 205 of UMRA.

EPA has determined that this final rule contains no regulatory requirements that might significantly or uniquely affect small governments, including Tribal governments. The requirements in today's rule relating to identification of impaired waters and establishment of TMDLs apply directly only to States, Territories and authorized Tribes. They do not apply to small governments of cities, counties or towns. Such entities are not required by today's rule to establish lists of impaired waters or TMDLs. Thus, the requirements of today's rule do not significantly or uniquely affect them in any direct way. To the extent that such small governments might in some indirect way be affected by a State's application of these regulations (*e.g.,* its identification of a particular waterbody on a section 303(d) list, or its establishment of a TMDL for a particular waterbody with wasteload allocations that contemplate permit reductions for a particular small government's waste treatment plant), such indirect effects are not significant or unique to small governments. They are not unique because they might be felt by any entity covered by a wasteload or load allocation in a given TMDL.

Today's rule will not significantly or uniquely affect Tribal governments. As explained earlier in this preamble, the Clean Water Act authorizes EPA to treat an Indian Tribe in the same manner as a State for purposes of establishing lists of waters and TMDLs, and EPA today is clarifying the test an Indian Tribe must meet to be authorized to establish lists of impaired waters and TMDLs. Currently, there are no Tribes authorized to establish TMDLs under section 303(d). Further, there are only fifteen Tribes with EPA approved or promulgated water quality standards. In addition, there are no Tribes authorized to administer the NPDES program. Consequently, this final rule will not significantly or uniquely affect Tribal governments. However, as Tribes continue to build their Clean Water Act capacity and establish water quality programs, more Tribes are likely to adopt water quality standards and seek approval to administer the NPDES program and establish TMDLs. Therefore, EPA included a Tribal representative on the TMDL FACA Committee that developed a set of recommendations that served as the framework for EPA in developing the TMDL proposal. The Committee's final report addressed Tribal issues, and recommended that EPA increase efforts to educate Tribes about water quality programs, including TMDLs, and ensure that EPA and State water quality staff respect the government-to-government relationship with Tribes in all TMDL activities. Additionally, once this rule is in effect, EPA will participate in Tribal conferences and workshops to inform and educate Tribal participants about the TMDL program and offer training to Tribes interested in administering the TMDL program on how to comply with the requirements of this rule.

D. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in part 130 of this rule under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2040–0071.

The requirements of part 130 guide how States and Territories (there are no currently authorized Tribes) identify and rank waterbodies which do not attain and maintain water quality standards following implementation of technology-based controls and establish TMDLs for those waterbodies that do not meet standards as a result of pollutant discharges. These activities are required by section 303(d) of the CWA. EPA also uses the information submitted under section 303(d) to review the section 303(d) lists submitted to review whether they comply with the requirements of the statute and EPA's regulations and reflect an accurate accounting of waterbodies not meeting water quality standards after the application of technology-based controls. Also as required by section 303(d), EPA reviews TMDLs developed and submitted by the States and Territories to determine their technical sufficiency and whether they otherwise comply with the requirements of section 303(d) and the EPA regulations. Information collected through the proposed activities is not confidential because all respondents are State and Territorial agencies working entirely in a public forum.

The revisions to part 130 increase the burden to States and Territories for four activities related to preparation of the section 303(d) lists: revising the listing methodology, establishing schedules for TMDL development, increased public participation, and providing the listing methodology in a new format. The revisions also increase the burden for two activities related to establishing TMDLs: developing the implementation plans and writing responses to public comments. EPA's currently approved ICR for the period March 1999 through April 2003 was based on the burden to respondents of the current program and did not include consideration of the impact of the proposed regulations. The revised ICR include the increased section 303(d) listing burden to States and Territories that would result under the proposed regulations in the first three years following the effective date of the regulation.

The average additional burden associated with the revised 303(d) rule requirements is estimated to be 6,497 hours per respondent, and the total annual burden for all 56 respondents is estimated to be 363,845 hours. The information for lists of impaired waterbodies and the methodologies to develop those lists is required every four years. TMDLs are required consistent with schedules that are developed by States and Territories as part of the lists. The average additional cost associated with the revised 303(d) rule requirements is estimated to be $252,676 per respondent, and the total annual cost for all 56 respondents is estimated to be $14,149,932. This estimate is entirely labor costs, and thus does not include a total capital and start-up cost component annualized over its expected useful life, a total operation and maintenance component, or a purchase of services component.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15. EPA is amending the table in 40 CFR part 9 of currently approved ICR control numbers issued by OMB for various regulations to list the information requirements contained in this rule.

E. Federalism, Executive Order 13132

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

Under section 6 of Executive Order 13132, EPA may not issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the federal government provides the funds necessary to pay the direct compliance costs incurred by State and local governments, or EPA consults with State and local officials early in the process of developing the proposed regulation. EPA also may not issue a regulation that has federalism implications and that preempts State law, unless EPA consults with State and local officials early in the process of developing the proposed regulation.

EPA received numerous comments asserting that today's rule does have federalism impacts and that the Agency had not met the requirements specified under E.O. 13132. Some commenters stated that EPA has no statutory or regulatory authority to require States to develop implementation plans as one of the required elements of TMDLs, and that such a requirement does substantially alter the relationship between EPA and the States in the TMDL Program. Other commenters believed that EPA did not work closely enough with the States or enable them to provide input on the rule. EPA also received comments claiming that the Agency's part 122 provisions enabling EPA to reissue State-issued expired and administratively-continued permits represents a significant intrusion into the functioning of State authorities and a substantial revision of existing relationships. Others stated that the NPDES provisions would lead to a shift in the traditional relationship between States and the federal government beyond what was intended by Congress in the Clean Water Act. EPA disagrees with these comments that today's rule has federalism implications, for the reasons described below.

Today's final rule amends the existing TMDL rule to clarify how impaired waters are identified and how TMDLs are established so that they can more effectively contribute to improving the nation's water quality. The regulation establishes new requirements for the content and format of the lists and the methodology for developing lists. It also establishes new requirements for the content and development of TMDLs, including development of an implementation plan as a required element of a TMDL and new public participation elements. These new requirements continue to allow the States, Territories and authorized Tribes to better tailor their water quality programs to address the characteristics, problems, risks and implementation tools available in individual watersheds, with meaningful involvement from stakeholders in the local community. Under this new rule, States continue to have primary responsibility for identifying impaired waters, setting priorities, and developing TMDLs. EPA's role continues to be one of reviewing State actions and exercising its authority to identify waters and develop TMDLs only in the face of inadequate State action or in unique circumstances where there are interstate waters or Federal water quality standards.

As explained previously in the preamble, EPA has estimated that the total incremental costs to the States associated with parts 130 and 123 of the rule, are estimated to be $22.88 million per year, with no direct costs being incurred by local governments.

After careful consideration, EPA does not believe that this final rule has federalism implications within the meaning of the Executive Order. However, EPA places great value on the views of state, local, and tribal governments, and in the spirit of the Executive Order undertook a consultation process along the lines specified in the Executive Order. EPA initiated or participated in many meetings, teleconferences and exchanges or correspondence with state, local, and tribal governments. Hundreds of hours of in-depth discussions with state, tribal and local officials and organizations representing them preceded and followed the August proposals. Prior to the proposal, EPA convened a Federal Advisory Committee to make recommendations for improving the efficiency and effectiveness of TMDLs. The TMDL FACA Committee was comprised of 20 members, including four senior level State officials, an elected local official, and a Tribal consortium representative. Over a period of one and one-half years, the TMDL FACA Committee held six meetings at locations throughout the country. These meetings were open to the general public, as well as representatives of State, local, and Tribal governments, and all included public comment sessions. The TMDL FACA Committee focused its deliberations on four broad issue areas: identification and listing of waterbodies; development and approval of TMDLs; EPA management and oversight; and science and tools. On July 28, 1998, the TMDL FACA Committee submitted its

final report to EPA containing more than 160 recommendation (100 of them were consensus recommendations) advocating changes and improvements to the existing TMDL rules. EPA notes that the one local elected official did file a minority report taking exception with major portions of the Report. As explained throughout this preamble, EPA carefully reviewed the TMDL FACA Committee's recommendations and incorporated, in whole or in part, most of the majority recommendations in this proposal.

Following completion of the FACA Committee process, EPA continued to meet with State and local government officials to seek their views on needed changes to the TMDL regulations and the NPDES regulations in support of TMDLs. Following the proposal, the Agency sponsored and participated in six public meetings nationwide, to better inform the public on what was included in the proposed rules, and to get informal feedback from the general public. These meetings took place in Denver, CO; Atlanta, GA; Kansas City, MO; Seattle, WA; Manchester, NH; and Los Angeles, CA. In addition, EPA has participated in numerous other meetings, conferences and public fora to discuss the proposed rule and listen to alternative approaches to achieving the nation's clean water goals. The Agency has had an ongoing dialogue with State and local officials and their national/regional organizations throughout the development of this rule. In particular, EPA has met with organizations representing State and local elected officials including: National Governors' Association, Western Governors' Association, Conference of State Legislatures, National Association of Counties, National League of Cities, and EPA's Local Government Advisory Committee. EPA also participated in numerous Congressional briefings and hearings on the proposed rule. There were numerous meetings with members and staff of organizations representing appointed officials of state government who play key roles in implementing the Clean Water Act, including the Environmental Commission of the States, the Association of State and Interstate Water Pollution Control Administrators, the Coastal States Organization, and International City Managers Association.

While expressing support for many of the final changes being considered by EPA, State officials and their representatives also expressed concerns about the capacity of State governments to carry out the new requirements in today's final rule. In particular, States were concerned about the capacity of the State governments to carry out any new requirements beyond those in the current regulations. Local government officials expressed concerns in particular about any TMDL allocation approaches that could in their view, result in municipal point sources having to bear an inequitable share of the pollutant load reductions need to attain water quality standards. Both levels of government were concerned that, by including the requirement for an implementation plan, EPA was directing specific activities that States and local governments must use to implement TMDLs. The final rule does not direct specific activities that State and local governments must use to implement TMDLs. In developing implementation plans State and local governments are accorded significant flexibility to choose which management measures and other activities whey will undertake to implement the load and wasteload allocations in a TMDL. In developing today's rule, EPA considered the concerns of State, local and Tribal governments and determined the need to revise the TMDL regulations to provide States, Territories and Tribes with clear, consistent, and balanced direction for listing waters and developing TMDLs and thereby improve the effectiveness, efficiency and pace of TMDL establishment and water quality improvement.

States were also concerned about the role of EPA in reissuing State-issued expired and administratively-continued NPDES permits. EPA determined that the exercise of its authority in limited circumstances is necessary to assure reasonable further progress in impaired waterbodies prior to the establishment of a TMDL and to provide reasonable assurance that TMDLs will be implemented. In developing today's final rule, EPA considered the concerns of State and local governments and determined the need to revise the NPDES and Water Quality Standards regulations to provide opportunities for further progress toward meeting water quality standards in impaired waterbodies and to provide reasonable assurance of effective TMDL development. Today's rule improves the effectiveness, efficiency and pace of water quality improvement and TMDL establishment.

F. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with these governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to OMB, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

As explained above in the discussion of UMRA requirements, today's rule does not significantly or uniquely affect the communities of Indian tribal governments. In addition, today's rule does not impose any direct compliance costs on Tribes. There are no currently authorized tribal section 303(d) programs; therefore there are no current costs. To the extent that a Tribe decides to apply for section 303(d) authorization, EPA expects that the Tribe will consider the costs in its decisions to apply. Since Tribal assumption of section 303(d) programs is voluntary, the costs of the program are voluntarily assumed. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule. Nonetheless, as stated in the discussion of UMRA, EPA intends to comply with the requirements of section 203 once the rule goes into effect by participating in Tribal conferences and workshops to inform and educate Tribal participants about the TMDL program and offer training to Tribes interested in administering the TMDL program on how to comply with the requirements of this rule.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 (62 Fed. Reg. 19885, April 23, 1997) applies to any rule that: (1) Is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the EPA must

evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by EPA.

This final rule is not subject to Executive Order 13045 because it is not "economically significant" as defined under Executive Order 12866. Further, it does not concern an environmental health or safety risk that EPA has reason to believe may have disappropriate effect on children.

H. National Technology Transfer and Advancement Act

As noted in the proposed rule, Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Pub L. No. 104–113, § 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.,* materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This final rulemaking does not involve technical standards. Therefore, EPA did not consider the use of any voluntary consensus standards.

I. Congressional Review Act

Under the Congressional Review Act, a rule is "major" if the Administrator of the Office of Information and Regulatory Affairs (OIRA) finds that it is likely to result in: an annual effect on the economy of $100 million or more; a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or significant adverse effects on competition, employment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic and expert markets. The OIRA Administrator finds that this rule is major because it will impose a major increase in costs on State and local government agencies.

J. H.R. 4425 and Implementation of this Rulemaking

Pending for the President's signature is an enrolled bill, H.R. 4425, which among other provisions includes the following, hereafter referred to as the "TMDL rider.

> None of the funds made available for fiscal years 2000 and 2001 for the Environmental Protection Agency may be used to make a final determination on or implement any new rule relative to the Proposed Revisions to the National Pollutant Discharge Elimination System Program and Federal Antidegradation Policy and the Proposed Revisions to the Water Quality Planning and Management Regulations Concerning Total Maximum Daily Load, published in the **Federal Register** on August 23, 1999.

EPA is carefully evaluating this provision, with the assistance of the Office of Legal Counsel, Department of Justice. There is virtually no legislative history which accompanies this provision. The Statement of Managers in the Conference Report simply repeats the bill language with the statement that the provision was added.

H.R. 4425 is an appropriations bill, and if it becomes law, it will remain in effect until October 1, 2001, at which time barring other action by Congress this rule would be allowed to be implemented. The TMDL rider in HR 4425 could also be repealed prior to that time. To accommodate this uncertainty, the final rule has an effective date of 30 days after Congress allows the rule to be implemented, which will be more than 30 days after the rule is published in the **Federal Register**. In this way, the effective date of today's rule will comply with section 553(d) of the Administrative Procedure Act, the Congressional Review Act requirements for major rules, and HR 4425. *In the time period before Congress allows EPA to implement this regulation, the pre-existing regulations will remain in place and EPA will continue to implement those regulations.*

Most of the unique elements of the new rules are scheduled to be phased in after October 1, 2001, such as new listing requirements in 2002, and new elements of TMDLs 18 months after publication of the rule. The only requirement of the new rule that would normally come into effect prior to October 1, 2001, is the requirement for providing the listing methodology to EPA by May 1, 2001. If the rider is in effect on that date, the rule is not effective and States, Territories, and authorized Tribe are not required to provide the methodology by that date. For this reason, if the rider is in effect at that time and the rule is not effective, the final rule requires States, Territories, and authorized Tribes to provide EPA at the time of submission of their year 2002 lists a description of the methodology used to develop their 2002 lists and a description of the data and information used to identify waters (including a description of the existing and readily available data and information used by the State, Territory, and authorized Tribe). These are the requirements of § 130.7(b), which is the listing requirement of the rules in effect prior to today's rule.

In addition, today's rule adjusts the date on which States, Territories, and authorized Tribes must comply with the new TMDL requirements. That date is either 18 months after the date of publication in the **Federal Register**, or nine months after effective date of the rule, which ever occurs later. This approach reflects a balance between providing sufficient time for States, Territories, and authorized Tribes to revise their procedures consistent with the new TMDL requirements and implementing the new requirements as quickly as practicable. As discussed previously in today's preamble, EPA believes 18 months provides States, Territories, and authorized Tribes sufficient time to complete TMDLs underway at the time today's rule is published. Also, States, Territories, and authorized Tribes will have sufficient notice of Congress' action, and thus will have sufficient time to complete TMDLs currently underway.

List of Subjects

40 CFR Part 9

Reporting and recordkeeping requirements.

40 CFR Part 122

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous substances, Reporting and recordkeeping requirements, Water pollution control.

40 CFR Part 123

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous substances, Indians-lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Water pollution control.

40 CFR Part 124

Environmental protection, Administrative practice and procedure, Hazardous substances, Indians-lands, Reporting and recordkeeping requirements, Water pollution control, Water supply.

40 CFR Part 130

Environmental protection, Intergovernmental relations, Reporting and recordkeeping requirements, Water pollution control.

Dated: July 11, 2000.

Carol Browner,

Administrator.

For the reasons set forth in the preamble, EPA amends 40 CFR parts 9, 122, 123, 124, and 130 as follows:

PART 9—OMB APPROVALS UNDER THE PAPERWORK REDUCTION ACT

1. The authority citation for part 9 continues to read as follows:

Authority: 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. In § 9.1, amend the table by removing the entries "130.6–130.10" and "130.15", and adding new entries in numerical order under the indicated heading to read as follows:

§ 9.1 OMB approvals under the Paperwork Reduction Act.

* * * * *

40 CFR citation	OMB control No.
* * * * *	
Water Quality Planning and Management	
130.7	2040–0071
130.11	2040–0071
130.20–130.37	2040–0071
130.51	2040–0071
130.60–130.61	2040–0071
130.64	2040–0071

* * * * *

PART 122—EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

1. The authority citation for part 122 continues to read as follows:

Authority: The Clean Water Act, 33 U.S.C. 1251 *et seq.*

2. Amend § 122.44 to revise paragraphs (d) introductory text and (d)(1) introductory text to read as follows:

§ 122.44 Establishing limitations, standards, and other permit conditions (applicable to State NPDES programs, see § 123.25).

* * * * *

(d) *Water quality standards and State requirements:* any requirements in addition to or more stringent than promulgated effluent limitations guidelines or standards under sections 301, 304, 306, 307, 318 and 405 of CWA necessary to:

(1) Achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality and State antidegradation provisions.

* * * * *

PART 123—STATE PROGRAM REQUIREMENTS

1. The authority citation for part 123 continues to read as follows:

Authority: The Clean Water Act, 33 U.S.C. 1251 *et seq.*

2. Amend § 123.44 to add paragraph (k) to read as follows:

§ 123.44 EPA review of and objections to State permits.

* * * * *

(k)(1) Where a State fails to submit a new draft or proposed permit to EPA within 90 days after the expiration of the existing permit, EPA may review the administratively-continued permit, using the procedure described in paragraphs (a)(1) through (h)(3) of this section, if:

(i) The administratively-continued permit allows the discharge of pollutant(s) into a waterbody for which EPA has established or approved a TMDL and the permit is not consistent with an applicable wasteload allocation; or

(ii) The administratively-continued permit allows the discharge of a pollutant(s) of concern into a waterbody that does not attain and maintain water quality standards and for which EPA has not established or approved a TMDL.

(2) To review an expired and administratively-continued permit under this paragraph (k) EPA must give the State and the discharger at least 90 days written notice of its intent to consider the expired permit as a proposed permit. At any time beginning 90 days after permit expiration, EPA may submit this notice.

(3) If the State submits a draft or proposed permit for EPA review at any time before EPA issues the permit under paragraph (h) of this section, EPA will withdraw its notice of intent to take permit authority under this paragraph (k) and will evaluate the draft or proposed permit under this section.

PART 124—PROCEDURES FOR DECISIONMAKING

1. The authority citation for part 124 continues to read as follows:

Authority: Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.*; Safe Drinking Water Act, 42 U.S.C. 300f *et seq.*; Clean Water Act, 33 U.S.C. 1251 *et seq.*; Clean Air Act, 42 U.S.C. 7401 *et seq.*

2. Revise § 124.7 to read as follows:

§ 124.7 Statement of basis.

(a) EPA shall prepare a statement of basis for every draft permit for which a fact sheet under § 124.8 is not prepared. The statement of basis shall briefly describe the derivation of the conditions of the draft permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons supporting the tentative decision. In particular, the statement of basis shall include:

(1) In cases where a TMDL has not been established for an impaired waterbody, an explanation of how permit limits and/or conditions were derived for all pollutants in the discharger's effluent for which the waterbody is impaired; and

(2) In cases where a TMDL has been established for an impaired waterbody, any TMDL that has been established for a pollutant contained in the discharger's effluent; the applicable wasteload allocation derived for the pollutant in the TMDL for that discharger; and an explanation of how permit limits for the pollutant of concern were derived as well as how those limits are consistent with the applicable wasteload allocation.

(b) The statement of basis shall be sent to the applicant and, on request, to any other person.

3. Amend § 124.8 by adding paragraphs (b)(4)(i) and (b)(4)(ii) to read as follows:

§ 124.8 Fact sheet.

* * * * *

(b) * * *

(4) * * *

(i) In cases where a TMDL has not been established for an impaired waterbody, an explanation of how permit limits and/or conditions were derived for all pollutants in the discharger's effluent for which the waterbody is impaired; and

(ii) In cases where a TMDL has been established for an impaired waterbody, any TMDL that has been established for a pollutant contained in the discharger's effluent; the applicable wasteload allocation derived for the pollutant in the TMDL for that discharger; and an explanation of how permit limits for the pollutant of concern were derived as well as how those limits are consistent with the applicable wasteload allocation.

* * * * *

PART 130—WATER QUALITY PLANNING AND MANAGEMENT

1. The authority citation for part 130 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*

2. Redesignate §§ 130.4 through 130.6, and 130.8 through 130.15 as follows:

§§ 130.4 through 130.15 [Redesignated]

Old section	New section
130.4	130.10
130.5	130.50
130.6	130.51
130.8	130.11
130.9	130.60
130.10	130.61
130.11	130.62
130.12	130.63
130.15	130.64

§ 130.3 [Removed]

3. Section 130.3 is removed.

§§ 130.0 through 130.2 and § 130.7 [Redesignated as Subpart A]

4. Sections 130.0 through 130.2 and 130.7 are designated as Subpart A and a subpart heading is added to read as follows:

Subpart A—Summary, Purpose and Definitions

§§ 130.10 and 130.11 [Redesignated as Subpart B]

5. Sections 130.10 and 130.11 are designated as Subpart B and a subpart heading is added to read as follows:

Subpart B—Water Quality Monitoring and Reporting

§§ 130.50 and 130.51 [Redesignated as Subpart D]

6. Sections 130.50 and 130.51 are designated as Subpart D and a subpart heading is added to read as follows:

Subpart D—Water Quality Planning and Implementation

§§ 130.60 through 130.64 [Redesignated as Subpart E]

7. Sections 130.60 through 130.64 are designated as Subpart E and a subpart heading is added to read as follows:

Subpart E—Miscellaneous Provisions

8. Amend § 130.1 to revise paragraph (a) as follows:

§ 130.1 Applicability.

(a) This part applies to all State, eligible Indian Tribe, interstate, areawide and regional and local CWA water quality planning and management activities undertaken on or after February 11, 1985 including all updates and continuing certifications for approved Water Quality Management plans developed under sections 208 and 303 of the Act.

* * * * *

9. Amend § 130.2 to revise paragraphs (c) (d), (e), (f), (g), (h), (i), (j), and (m), and add paragraphs (o), (p), (q), and (r) as follows:

§ 130.2 Definitions.

* * * * *

(c) *Pollution.* The man-made or man-induced alteration of the chemical, physical, biological, and radiological integrity of water. (See Clean Water Act section 502(19).)

(d) *Pollutant.* Dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials (except those regulated under Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*)), heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal, and agricultural waste discharged into water. This term does not mean: "sewage from vessels" within the meaning of section 312 of the Clean Water Act; or water, gas, or other material that is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the State in which the well is located, and if the State determines that such injection or disposal will not result in the degradation of ground or surface water resources. (See Clean Water Act section 502(6).)

(e) *Load or loading.* An amount of matter or thermal energy that is introduced into a receiving water; to introduce matter or thermal energy into a receiving water. Loading of pollutants may be either man-caused or natural (natural background loading).

(f) *Load allocation.* The portion of a TMDL's pollutant load allocated to a nonpoint source, storm water source for which a National Pollutant Discharge Elimination System (NPDES) permit is not required, atmospheric deposition, ground water, or background source of pollutants.

(g) *Wasteload allocation.* The portion of a TMDL's pollutant load allocated to a point source of a pollutant for which an NPDES permit is required. For waterbodies impaired by both point and nonpoint sources, wasteload allocations may reflect anticipated or expected reductions of pollutants from other sources if those anticipated or expected reductions are supported by reasonable assurance that they will occur.

(h) *Total maximum daily load (TMDL).* A TMDL is a written, quantitative plan and analysis for attaining and maintaining water quality standards in all seasons for a specific waterbody and pollutant. TMDLs may be established on a coordinated basis for a group of waterbodies in a watershed. TMDLs must be established for waterbodies on Part 1 of the list of impaired waterbodies and must include the following eleven elements:

(1) The name and geographic location of the impaired waterbody;

(2) Identification of the pollutant and the applicable water quality standard;

(3) Quantification of the pollutant load that may be present in the waterbody and still ensure attainment and maintenance of water quality standards;

(4) Quantification of the amount or degree by which the current pollutant load in the waterbody, including the pollutant load from upstream sources that is being accounted for as background loading, deviates from the pollutant load needed to attain and maintain water quality standards;

(5) Identification of source categories, source subcategories or individual sources of the pollutant;

(6) Wasteload allocations;

(7) Load allocations;

(8) A margin of safety;

(9) Consideration of seasonal variations;

(10) Allowance for reasonably foreseeable increases in pollutant loads including future growth; and

(11) An implementation plan.

(i) *Total Maximum Daily Thermal Load (TMDTL).* A TMDTL is a TMDL for impaired waterbodies receiving a thermal discharge.

(j) *Impaired waterbody.* Any waterbody of the United States that does not attain and maintain water quality standards (as defined in 40 CFR Part 131) throughout the waterbody due to an individual pollutant, multiple pollutants, or other causes of pollution, including any waterbody for which biological information indicates that it does not attain and maintain water quality standards. Where a waterbody receives a thermal discharge from one or more point sources, impaired means that the waterbody does not have or maintain a balanced indigenous population of shellfish, fish, and wildlife.

* * * * *

(m) *Management measures.* Best practical and economically achievable measures to control the addition of pollutants to waters of the United States through the application of nonpoint pollution control practices, technologies, processes, siting criteria, operating methods, best management practices, or other alternatives.

* * * * *

(o) *Thermal discharge.* The discharge of the pollutant heat from a point source

that is required to have an NPDES permit.

(p) *Reasonable assurance.* Reasonable assurance means a demonstration that TMDLs will be implemented through regulatory or voluntary actions, including management measures or other controls, by Federal, State or local governments, authorized Tribes, or individuals.

(1) For point sources regulated under section 402 of the Clean Water Act, the demonstration of reasonable assurance must identify procedures that ensure that NPDES permits will be issued, reissued, or revised as expeditiously as practicable to implement applicable TMDL wasteload allocations for point sources.

(2) For nonpoint sources, storm water sources for which an NPDES permit is not required, atmospheric deposition, ground water or background sources of a pollutant, the demonstration of reasonable assurance must show that management measures or other control actions to implement the load allocations contained in each TMDL meet the following four-part test: they specifically apply to the pollutant(s) and the waterbody for which the TMDL is being established; they will be implemented as expeditiously as practicable; they will be accomplished through reliable and effective delivery mechanisms; and they will be supported by adequate water quality funding.

(i) Adequate water quality funding means that the State, Territory, or authorized Tribe has allocated existing water quality funds from any source to the implementation of the TMDL load allocations to the fullest extent practicable and in a manner consistent with the effective operation of its clean water program. In the event that existing funding is not adequate to fully implement the TMDL load allocations, you may satisfy the funding requirement of reasonable assurance by including an explanation of when adequate funds will become available and the schedule by which these funds will be used to implement the TMDL load allocations. When EPA establishes a TMDL, EPA must show there is adequate funding. It may do so by conditioning Clean Water Act grants to the fullest extent practicable and in a manner consistent with effective operation of other Clean Water Act programs.

(ii) Voluntary and incentive-based actions, or existing programs, procedures or authorities are acceptable means of demonstrating reasonable assurance if they satisfy the four-part test. Examples of voluntary and incentive-based actions include: State, Territorial, or authorized Tribal programs to audit implementation of agricultural or forestry best management practices; memoranda of understanding between States, Territories, authorized Tribes, and organizations representing categories, subcategories, or individual sources; or State-, Territory-, or authorized Tribe-approved programs for categories, subcategories or individual sources to ensure effectiveness of best management practices.

(iii) Examples of existing programs, procedures or authorities that may be reliable delivery mechanisms include State, Territorial, and authorized Tribal programs approved by EPA under section 319 of the Clean Water Act; participation in existing United States Department of Agriculture conservation or water quality protection programs; participation in existing programs under the Coastal Zone Act Reauthorization Amendments; regulations; local ordinances; performance bonds; contracts; cost-share agreements; memoranda of understanding; site-specific or watershed-specific voluntary actions; and compliance audits of best management practices.

(q) *Waterbody.* A geographically defined portion of navigable waters, waters of the contiguous zone, and ocean waters under the jurisdiction of the United States, made up of one or more of the segments of rivers, streams, lakes, wetlands, coastal waters and ocean waters. Identifications of waterbodies should be consistent with the way in which segments are described in State, Territorial, or authorized Tribal water quality standards.

(r) *List of Impaired Waterbodies or "List."* The list of all impaired waterbodies submitted by a State, Territory, or authorized Tribe. This list consists of Parts 1, 2, 3, and 4 described in § 130.27 and the prioritized schedule described in § 130.28. Part 1 of the list consists of the identification of the waterbodies for which TMDLs must be established and a prioritized schedule for establishing TMDLs.

10. Revise § 130.7 as follows:

§ 130.7 Total maximum daily loads (TMDL) and individual water quality-based effluent limitations.

(a)–(b) [Reserved]

(c) *Development of TMDLs and individual water quality based effluent limitations.* This paragraph will expire January 11, 2002 or nine months from the effective date of this rule, whichever occurs later.

(1) Each State shall establish TMDLs for the waterbodies identified at § 130.27(a) and in accordance with the priority ranking. For pollutants other than heat, TMDLs shall be established at levels necessary to attain and maintain the applicable narrative and numerical WQS with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality. Determinations of TMDLs shall take into account critical conditions for stream flow, loading, and water quality parameters.

(i) TMDLs may be established using a pollutant-by-pollutant or biomonitoring approach. In many cases both techniques may be needed. Site-specific information should be used wherever possible.

(ii) TMDLs shall be established for all pollutants preventing or expected to prevent attainment of water quality standards as identified pursuant to § 130.27(a). Calculations to establish TMDLs shall be subject to public review as defined in the State CPP.

(2) Each State shall estimate for the waterbodies identified at § 130.27(a) that require thermal TMDLs, the total maximum daily thermal load which cannot be exceeded in order to assure protection and propagation of a balanced, indigenous population of shell-fish, fish and wildlife. Such estimates shall take into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and the dissipative capacity of the identified waters or parts thereof. Such estimates shall include a calculation of the maximum heat input that can be made into each such part and shall include a margin of safety which takes into account any lack of knowledge concerning the development of thermal water quality criteria for protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in the identified waters or parts thereof.

11. Amend newly designated § 130.10 in paragraph (a) by adding a note to the paragraph, and revise paragraph (b) as follows:

§ 130.10 Water quality monitoring.

(a) * * *

Note to paragraph (a): EPA recommends that you use "Policy and Program Requirements to Implement the Mandatory Quality Assurance Program", EPA Order 5360.1, April 3, 1984, as revised July 16, 1998, or subsequent revisions.

(b) The State's water monitoring program shall include collection and analysis of physical, chemical and biological data and quality assurance and control programs to assure scientifically valid data. The uses of

these data include determining abatement and control priorities; developing and reviewing water quality standards, total maximum daily loads, wasteload allocations and load allocations; assessing compliance with National Pollutant Discharge Elimination System (NPDES) permits by dischargers; reporting information to the public through the section 305(b) report and reviewing site-specific monitoring efforts and source water assessments conducted under the Safe Drinking Water Act.

12. Amend newly designated § 130.11 to revise paragraph (a) as follows:

§ 130.11 Water quality report.

(a) Each State shall prepare and submit biennially to the Regional Administrator a water quality report in accordance with section 305(b) of the Act. The water quality report serves as the primary assessment of State water quality. Based upon the water quality data and problems identified in the 305(b) report, States develop water quality management (WQM) plan elements to help direct all subsequent control activities. Water quality problems identified in the 305(b) report should be analyzed through water quality management planning leading to the development of alternative controls and procedures for problems identified in the latest 305(b) report. States may also use the 305(b) report to describe ground-water quality and to guide development of ground-water plans and programs. Water quality problems identified in the 305(b) report should be emphasized and reflected in the State's WQM plan and annual work program under sections 106 and 205(j) of the Clean Water Act and where the designated use includes public water supply, in the source water assessment conducted under the SDWA.

* * * * *

13. Add Subpart C consisting of §§ 130.20 through 130.37 as follows:

Subpart C—Identifying Impaired Waterbodies And Establishing Total Maximum Daily Loads (TMDLs)

What This Subpart Covers

Sec.

Subpart C—Identifying Impaired Waterbodies And Establishing Total Maximum Daily Loads (TMDLs)

What This Subpart Covers

§ 130.20 Who must comply with subpart C in this part?

(a) Subpart C applies to States, Territories, and authorized Tribes. The term "you" in this subpart refers to these three governmental entities.

(b) Portions of this subpart apply to the United States Environmental Protection Agency (EPA). When this is the case, the rule specifies EPA's responsibilities and obligations.

§ 130.21 What is the purpose of this subpart?

(a) This subpart explains how to identify and list impaired waterbodies and establish TMDLs in accordance with section 303(d) of the Clean Water Act. The subpart also explains how EPA reviews and approves or disapproves your lists and TMDLs. Specifically, the subpart explains how to:

(1) Assemble all existing and readily available water quality-related data and information;

(2) Document your methodology for considering and evaluating all existing and readily available water quality-related data and information to make decisions on your list and provide the methodology to EPA and the public;

(3) Identify impaired waterbodies to be included on the list and decide which of those waterbodies will have TMDLs established for them;

(4) Identify the pollutant or pollutants causing the impairment for all waterbodies on Part 1 of your list;

(5) Develop a prioritized schedule for establishing TMDLs for waterbodies on Part 1 of your list;

(6) Establish TMDLs for waterbodies on Part 1 of your list and submit them to EPA for review;

(7) Provide public notice and an opportunity for public comment on your methodology, your list, and TMDLs prior to final submission to EPA.

(b) It also explains how EPA must:

(1) Review and approve or disapprove your list of impaired waterbodies;

(2) Develop a list where you fail to do so or if EPA disapproves your list;

(3) Review and approve or disapprove your TMDLs;

(4) Establish TMDLs if you have not made substantial progress in establishing TMDLs in accordance with your approved schedule, or if EPA disapproves your TMDLs .

Listing Impaired Waterbodies, and Documenting Your Methodology for Making Listing Decisions

§ 130.22 What data and information do you need to assemble and consider to identify and list impaired waterbodies?

(a) You need to assemble and consider all existing and readily available water quality-related data and information when you develop your list of impaired waterbodies.

(b) Existing and readily available water quality-related data and information includes at a minimum the data and information in and forming the basis for the following:

(1) Your most recent EPA approved section 303(d) list;

(2) Your most recent Clean Water Act section 305(b) report;

(3) Clean Water Act section 319 nonpoint source assessments;

(4) Drinking water source water assessments under section 1453 of the Safe Drinking Water Act;

(5) Dilution calculations, trend analyses, or predictive models for determining the physical, chemical or biological integrity of streams, rivers, lakes, and estuaries; and

(6) Data, information, and water quality problems reported from local, State, Territorial, or Federal agencies (especially the U.S. Geological Survey National Water Quality Assessment (NAWQA) and National Stream Quality Accounting Network (NASQAN)), Tribal

governments, members of the public, and academic institutions.

§ 130.23 How do you develop and document your methodology for considering and evaluating all existing and readily available data and information to develop your list?

(a) Your methodology needs to explain how you will consider and evaluate all existing and readily available water quality-related data and information to determine which waterbodies you will include on Parts 1, 2, 3, and 4 of your list, and to determine how you will prioritize your schedule for establishing TMDLs for waterbodies on Part 1 of your list. You must develop a draft methodology and notify the public of the availability of the draft methodology for review and comment. You should notify directly those who submit a written request for notification. You must provide the public an opportunity to submit comments on the draft methodology for no less than 60 days. You must provide a summary of all comments received and your responses to significant comments when you provide a copy of the final methodology to EPA, as required by § 130.24 of this subpart. You must make your final methodology available to the public when you provide a copy to EPA.

(b) The methodology should explain how you will consider and evaluate the following types of data and information when you make listing decisions and develop your prioritized schedule for TMDL establishment:

(1) Physical data and information;

(2) Chemical data and information;

(3) Biological data and information;

(4) Aquatic and riparian habitat data and information; and

(5) Other data and information about waterbody impairments, including drinking water susceptibility analyses.

(c) Your methodology should, at a minimum, identify those types of data and information that you will treat as "existing and readily available" and explain how you consider the following factors in making listing decisions and in developing your prioritized schedule for TMDL establishment:

(1) Data quality and age;

(2) Degree of confidence you have in the information you use to determine whether waterbodies are impaired, including a description of the quality assurance/quality control factors you will apply to data and information; and

(3) Number and degree of exceedances of numeric or narrative criteria and periods of nonattainment of designated uses or other factors used to determine whether waterbodies are impaired.

(d) Your methodology should describe the procedures and methods you will use to collect ambient water quality information.

(e) Your methodology should, at a minimum, also include the following:

(1) A description of the selection factors you will use to include and remove waterbodies from your list;

(2) A process for resolving disagreements with other jurisdictions involving waterbodies crossed by State, Territorial, Tribal or international boundaries; and

(3) A description of the method and factors you will use to develop your prioritized schedule for establishing TMDLs.

§ 130.24 When must you provide your methodology to EPA?

(a)(1) If this section is not effective by May 1, 2001, you must provide to EPA a description of the methodology used to develop your 2002 list and a description of the data and information used to identify waters (including a description of the existing and readily available data and information used by the State, Territory, and authorized Tribe) by April 1, 2002. The provisions of § 130.23(b) through (e) do not apply to this methodology.

(2) If this section is effective on or before May 1, 2001, you must provide your final methodology for your 2002 list and a summary of public comments on your methodology by November 1, 2001. This methodology will apply to the list required in 2002.

(b) You must provide to EPA the final methodology and a summary of public comments for your 2006 and subsequent lists submitted under § 130.30(a) no later than two years before you submit your next list, beginning in the year 2004. For example, you provide to EPA the methodology for your 303(d) list for 2006 on or before April 1, 2004. When providing final methodologies to EPA, you need to provide only the parts of the previous methodology you are revising; however, prior to submitting your final methodology to EPA, the entire methodology must be available to the public.

(c) EPA will review your final methodology and will provide you with comments within 60 days of receiving it. EPA will not approve or disapprove your methodology. EPA will consider your methodology in its review and approval or disapproval of your next list.

§ 130.25 What is the scope of your list of impaired waterbodies?

(a) Your approvable list of impaired waterbodies includes, based on all existing and readily available water quality-related data and information using appropriate quality assurance/quality control:

(1) Waterbodies that are impaired by individual pollutants, multiple pollutants, or pollution from any source, including point sources, nonpoint sources, storm water sources for which a National Pollutant Discharge Elimination System (NPDES) permit is not required, ground water, and atmospheric deposition.

(2) Waterbodies for which biological information indicates that they do not attain and maintain water quality standards.

(3) Waterbodies that are impaired by point sources only, nonpoint sources only, or by a combination of point and nonpoint sources.

(b) Your list may include, at your option, waterbodies that are not impaired, but which, based on expected changes in loadings or conditions, you anticipate will become impaired in the next four years.

§ 130.26 How do you apply your water quality standards antidegradation policy to the listing of impaired waterbodies?

(a) Water quality standards as defined at 40 CFR Part 131 include several requirements, including one for a State antidegradation policy. Your list must include waterbodies consistent with your antidegradation policy as described below.

(1) Any waterbody is impaired if it is not maintaining a designated use or more protective existing use that was attained on or after November 28, 1975.

(2) Any Tier 3 waterbody is impaired when the level of water quality that existed at the time the waterbody was designated as Tier 3 has declined. Tier 3 waters are waters you have designated as outstanding national resource waters.

(b) [Reserved]

§ 130.27 How must you format your list of impaired waterbodies?

(a) Your list of impaired waterbodies must include the following four parts:

(1) *Part 1.* Waterbodies impaired by one or more pollutant(s) as defined by § 130.2(d), unless listed in Part 3 or 4. Waterbodies identified as impaired through biological information must be listed on Part 1 unless you know that the impairment is not caused by one or more pollutants, in which case you may place the waterbody on Part 2 of the list. Where the waterbody is listed due to biological information, the first step in establishing the TMDL is identifying the pollutant(s) causing the impairment. Waterbodies must also be included on Part 1 where you or EPA have determined, in accordance with §§ 130.32(c)(1)(v), (2)(vii), and (3)(i),

that a TMDL needs to be revised. Waterbodies that you chose to list pursuant to § 130.25(b), because you anticipate that they will become impaired by one or more pollutant(s), must be included on Part 1 of your list. A TMDL is required for waterbodies on Part 1 of the list.

(2) *Part 2.* Waterbodies impaired by pollution as defined by § 130.2(c) but not impaired by one or more pollutants. A TMDL is not required for waterbodies on Part 2 of the list.

(3) *Part 3.* Waterbodies for which EPA has approved or established a TMDL and water quality standards have not yet been attained. The waterbody must be placed on Part 1 of the list and scheduled for establishment of a new TMDL if you or EPA determine that substantial progress towards attaining the water quality standard is not occurring.

(4) *Part 4.* Waterbodies that are impaired, for which the State, Territory, or authorized Tribe demonstrates that water quality standards will be attained by the date of submission of the next list as a result of implementation of technology-based effluent limitations required by sections 301(b), 306, or 307 of the Clean Water Act or other controls enforceable by State, Territorial or authorized Tribal or Federal law or regulation (including more stringent water quality-based effluent limitations in NPDES permits). A TMDL is not required for waterbodies on Part 4. If a waterbody listed on Part 4 does not attain water quality standards by the time the next list is required to be submitted to EPA, such waterbody must be included on Part 1 unless you can demonstrate that the failure to attain water quality standards is due to failure of point source dischargers to comply with applicable NPDES permit effluent limitations, which are in effect. TMDLs for waterbodies moved from Part 4 to Part 1 of the list must be scheduled for establishment in accordance with the requirements of § 130.28(b).

(b) You must identify:

(1) The pollutant or pollutants causing the impairment for each waterbody on Part 1 of the list, or for waterbodies for which the impairment is a result of biological information, the pollutant or pollutants if known.

(2) The type of pollution causing the impairment for each waterbody on Part 2.

(3) The geographic location of each waterbody on the list, using the National Hydrography Database or subsequent revisions, or a compatible georeferenced database.

(c) Any one of the three reporting formats described in this paragraph are acceptable.

(1) *Separate section 303(d) list.* You may submit your list as a separate four-part section 303(d) list.

(2) *Consolidated section 303(d) list and section 305(b) report.* You may submit your list as a component of your water quality report (section 305(b) report) . You must clearly identify the parts of your water quality report you are submitting as your four-part section 303(d) list.

(3) *Part 1 waterbodies in section 303(d) report and Parts 2, 3, and 4 waterbodies in section 305(b) report.* You may submit Part 1 of your list as a separate section 303(d) list, provided you include Parts 2, 3, and 4 of your list as a component of your section 305(b) water quality report and clearly identify the parts of your water quality report that you are submitting as Parts 2, 3, and 4 of your section 303(d) list.

(d) EPA will approve or disapprove your four-part section 303(d) list regardless of the reporting format that you use.

§ 130.28 What must your prioritized schedule for submitting TMDLs to EPA contain?

(a) Your list must include a prioritized schedule for establishing TMDLs for all waterbodies and pollutant combinations on Part 1 of your list.

(b) You must schedule establishment of TMDLs:

(1) as expeditiously as practicable, evenly paced over the duration of the schedule;

(2) no later than 10 years from July 10, 2000, if the waterbody and pollutant was listed on any part of the list before that date or 10 years from the due date of the first subsequent list after July 10, 2000, on which the waterbody and pollutant is initially included. You may extend the schedule for one or more TMDLs by no more than five years if you explain to EPA as part of your list submission that, despite expeditious actions, establishment of all TMDLs on Part 1 of your list within 10 years is not practicable.

(c) You must identify each specific TMDL you intend to establish and the one year period during which it is scheduled to be established. Your schedule should provide for the coordinated establishment of TMDLs within a watershed to the fullest extent practicable.

(d) You must:

(1) explain how you considered the severity of the impairment and the designated use of the waterbody in prioritizing waterbodies for TMDL establishment on your schedule.

(2) Identify waterbodies:

(i) That are designated in water quality standards as a public drinking water supply, or are used as a source of drinking water, and are impaired by a pollutant that is contributing to a violation of a national primary drinking water regulation (NPDWR) by a public water system or causes a public water system to be vulnerable to a violation of a NPDWR; or

(ii) Where species listed as threatened or endangered under section 4 of the Endangered Species Act are present in the waterbody.

(3) Waterbodies identified in this subsection must be given a higher priority unless you explain why a different priority is appropriate.

(e) When identifying and scheduling your waterbodies for TMDL establishment, you may also consider the presence of sensitive aquatic species and other factors such as the historical, cultural, economic and aesthetic uses of the waterbody. You may consider other factors in prioritizing your schedule, including the value and vulnerability of particular waterbodies; the recreational, economic, and aesthetic importance of particular waterbodies; TMDL complexity; the degree of public interest and support; State, Territorial and authorized Tribal policies and priorities; national policies and priorities; or the efficiencies that might result from coordinating the establishment of TMDLs for multiple waterbodies located in the same watershed. If you are using a rotating basin approach, you may take that approach into account when prioritizing waterbodies on your schedule because of the inherent efficiencies of such an approach.

(f) If you consider other factors, you should identify each factor and explain how you used each factor in prioritizing your schedule.

§ 130.29 Can you modify your list?

(a) You may modify your list at times other than those required by § 130.30, in accordance with this section. If you modify your list and prioritized schedule, you must submit your list to EPA as a modification to your list under this section and follow the public participation requirements of § 130.36, except that such requirements shall apply only to waterbodies and issues addressed by the modification. The requirements of subsections (b), (c), (d), and (e) of this section apply to lists submitted under § 130.30(a) or at any other time.

(b) You must keep each impaired waterbody on your list for a particular

pollutant until it is attaining and maintaining applicable water quality standards for that pollutant.

(c) You may remove a listed waterbody for a particular pollutant if new data or information indicate that the waterbody is attaining and maintaining the applicable water quality standards for that pollutant.

(d) You may add a waterbody to your list if you have data or information indicating that it is impaired.

(e) You may modify your prioritized schedule for establishing TMDLs in accordance with § 130.28 based on new information provided that the modification does not reduce the number of TMDLs scheduled for completion during the first four years of the current approved schedule.

(f) EPA must issue an order approving or disapproving the modification of your list or prioritized schedule in accordance with § 130.30(b).

(g) EPA may also issue an order modifying a list consistent with the provisions of paragraphs (c), (d) and (e) of this section, after providing notice and an opportunity for public comment.

§ 130.30 When must you submit your list of impaired waterbodies to EPA and what will EPA do with it?

(a) You must submit your list of impaired waterbodies to EPA by April 1 of every fourth year, beginning in the year 2002.

(b) EPA must:

(1) Issue an order approving or disapproving your list or modification of your list, within 30 days of receipt, in whole or in part if it is not consistent with the requirements of §§ 130.25 through 130.29.

(2) By order, within 30 days of disapproval, issue a new list consistent with §§ 130.25 through 130.29 if EPA disapproves or partially disapproves your list or modification of your list.

(3) Publish the order required by paragraph (b)(2) of this section in the **Federal Register** and a general circulation newspaper in your State, Territory, or where your Tribe is located and request public comment for at least 30 days.

(4) Issue a subsequent order revising the new list after the close of the public comment period, as appropriate, if EPA revises its initial order required by paragraph (b)(2) of this section based on public comment.

(5) Send you a copy of its order(s).

(6) Establish a list of impaired waterbodies for your State, Territory, or authorized Tribe consistent with §§ 130.25 through 130.29 if you fail to do so by April 1 of every fourth year.

(c) EPA may establish lists of waterbodies that do not attain and maintain Federal water quality standards.

(d) You must incorporate into your water quality management plan those portions of your list that EPA approves or establishes.

Establishment and EPA Review of TMDLs

§ 130.31 Which waterbodies need TMDLs?

(a) You must establish TMDLs for all waterbodies and pollutant combinations on Part 1 of your list in accordance with your approved schedule and submit the TMDLs to EPA.

(b) You do not need to establish TMDLs for waterbodies on Parts 2, 3, and 4 of your list.

§ 130.32 What are the minimum elements of a TMDL submitted to EPA?

(a) A TMDL is a written, quantitative plan and analysis for attaining and maintaining water quality standards in all seasons for a specific waterbody and pollutant. TMDLs may be established on a coordinated basis for a group of waterbodies in a watershed. A TMDL provides the opportunity to compare relative contributions of pollutants from all sources and consider technical and economic trade-offs between point and nonpoint sources.

(b) You must include the following minimum elements in any TMDL submitted to EPA:

(1) The name and geographic location, as required by § 130.27(b)(3), of the impaired waterbody for which the TMDL is being established and, to the extent known, the names and geographic locations of the waterbodies upstream of the impaired waterbody that contribute significant amounts of the pollutant for which the TMDL is being established;

(2) Identification of the pollutant and the applicable water quality standard for which the TMDL is being established;

(3) Quantification of the pollutant load that may be present in the waterbody and still ensure attainment and maintenance of water quality standards;

(4) Quantification of the amount or degree by which the current pollutant load in the waterbody, including the pollutant load from upstream sources that is being accounted for as background loading, deviates from the pollutant load needed to attain and maintain water quality standards;

(5) Identification of source categories, source subcategories, or individual sources of the pollutant consistent with the definitions of load and wasteload allocation in §§ 130.2(f) and (g), respectively, for which the wasteload allocations and load allocations are being established;

(6) Wasteload allocations assigned to point sources permitted under section 402 of the Clean Water Act discharging the pollutant for which the TMDL is being established that will, when implemented in conjunction with assigned load allocations, if any, result in the attainment and maintenance of water quality standards in the waterbody. Wasteload allocations that reflect pollutant load reductions for point sources needed to ensure that the waterbody attains and maintains water quality standards must be expressed as individual wasteload allocations for each source. Wasteload allocations that do not reflect pollutant load reductions from point sources needed for the waterbody to attain and maintain water quality standards may be expressed as an individual wasteload allocation for a source or may be included within a wasteload allocation for a category or subcategory of sources. Wasteload allocations for sources subject to a specified general permit, regardless of whether they reflect pollutant reductions, may be allotted to categories of sources. You should submit supporting technical analyses demonstrating that wasteload allocations, when implemented in conjunction with necessary load allocations, will result in the attainment and maintenance of the water quality standard(s) applicable to the pollutant for which the TMDL is being established;

(7) Load allocations, ranging from reasonably accurate estimates to gross allotments, for nonpoint sources of a pollutant, storm water sources for which an NPDES permit is not required, atmospheric deposition, ground water or background sources of a pollutant that, when implemented in conjunction with assigned wasteload allocations, if any, result in the attainment and maintenance of water quality standards in the waterbody. If feasible, a separate load allocation must be allocated to each source of a pollutant. Where this is not feasible, load allocations may be allocated to categories or subcategories of sources. Pollutant loads from sources that do not need to be reduced for the waterbody to attain and maintain water quality standards may be included within a category of sources or subcategory of sources. You should submit supporting technical analyses demonstrating that load allocations, when implemented in conjunction with necessary wasteload allocations, will result in the attainment and maintenance of water quality standards

applicable to the pollutant for which the TMDL is being established;

(8) A margin of safety that appropriately accounts for uncertainty related to the TMDL, including uncertainties associated with pollutant loads, modeling water quality, and monitoring water quality. A margin of safety may be expressed as unallocated assimilative capacity or conservative analytical assumptions used in establishing the TMDL;

(9) Consideration of seasonal variations, stream water flow levels, and other environmental factors that affect the relationship between pollutant loadings and water quality impacts, such that the allocations will result in attainment and maintenance of water quality standards in all seasons of the year and during all flow conditions;

(10) Allowance for reasonably foreseeable increases in pollutant loads including future growth; and

(11) An implementation plan which meets the requirements of paragraph (c) of this section.

(c) The purpose of the implementation plan is to provide a description, in a level of detail appropriate to the circumstances, of actions necessary to implement the TMDL so that the waterbody attains and maintains water quality standards. EPA does not expect the implementation plan to be a complex, lengthy document.

(1) For waterbodies impaired only by point sources for which NPDES permits will implement the TMDL, an implementation plan must include:

(i) An identification of the wasteload allocation(s) that the effluent limitation(s) must be consistent with pursuant to § 122.44(d)(1)(vii)(B) in the NPDES permit(s) that will be issued, reissued, or revised. In all instances, the NPDES permit effluent limitation(s) must be consistent with the applicable wasteload allocation(s). You must identify:

(A) The point sources that are or will be regulated by individual permits and the categories or subcategories of point sources that are or will be regulated by general permits that will be subject to such effluent limitations.

(B) The permit, if you intend to implement the wasteload allocation by requiring a point source to apply for coverage under an existing NPDES general permit.

(C) The elements of the general permit necessary to ensure implementation of the wasteload allocation, if you intend for a point source to be regulated by a new general permit.

(ii) A schedule for issuing, reissuing or revising the NPDES permit(s) as expeditiously as practicable to include effluent limits consistent with the wasteload allocation(s) in the TMDL. EPA must:

(A) Reissue or revise the permit(s) within two years after the establishment of the TMDL where EPA is the NPDES permitting authority.

(B) Notify the NPDES Director of EPA's intent to object to the permit pursuant to the provisions of § 123.44(k) within one year after expiration of the permit term, or where the permit term expired prior to the establishment of the TMDL, within one year from establishment of the TMDL where the State is the NPDES permitting authority, and the permit term has expired.

(C) Issue an NPDES permit that incorporates effluent limitations based on wasteload allocation(s) in the TMDL within one year thereafter where the State has not done so. Nothing in this paragraph (c)(1)(ii) limits EPA's authority to reissue a permit after the expiration of the two-year time frame set forth in this paragraph (c)(1)(ii), or invoke the mechanism described in § 123.44(k) after the expiration of either of the one-year time frames set forth in this paragraph (c)(1)(ii).

(iii) The date by which the implementation plan will result in the waterbody attaining and maintaining applicable water quality standards and the basis for that determination;

(iv) A monitoring and/or modeling plan designed to measure the effectiveness of the controls implementing the wasteload allocations and the progress the waterbody is making toward attaining water quality standards; and

(v) The criteria you will use to determine that substantial progress toward attaining water quality standards is being made and if not, the criteria for determining whether the TMDL needs to be revised.

(2) For waterbodies impaired only by nonpoint source(s), storm water sources for which an NPDES permit is not required, atmospheric deposition, ground water or background sources of a pollutant where no NPDES permit will implement the TMDL, the implementation plan must include:

(i) An identification of the source categories, source subcategories, or individual sources of the pollutant which must be controlled to implement the load allocations;

(ii) A description of specific regulatory or voluntary actions, including management measures or other controls, by Federal, State or local governments, authorized Tribes, or individuals that provide reasonable assurance, consistent with § 130.2(p), that load allocations will be implemented and achieve the assigned load reductions. Your selection of management measures for achieving the load allocation may recognize both the natural variability and the difficulty in precisely predicting the performance of management measures over time;

(iii) A schedule, which is as expeditious as practicable, for implementing the management measures or other control actions to achieve load allocations in the TMDL within 5 years, when implementation within this period is practicable;

(iv) The date by which the implementation plan will result in the waterbody attaining and maintaining applicable water quality standards, and the basis for that determination;

(v) A description of interim, measurable milestones for determining whether management measures or other control actions are being implemented;

(vi) A monitoring and/or modeling plan designed to measure the effectiveness of the management measures or other controls implementing the load allocations and the progress the waterbody is making toward attaining water quality standards, and a process for implementing stronger and more effective management measures if necessary; and

(vii) The criteria you will use to determine that substantial progress toward attaining water quality standards is being made and if not, the criteria for determining whether the TMDL needs to be revised.

(3) For waterbodies impaired by both point sources and nonpoint sources where NPDES permits and management measures or other control actions for nonpoint or other sources will implement the TMDL, the implementation plan must include:

(i) The elements of paragraphs (c)(1) and (2) of this section; and

(ii) A description of the extent to which wasteload allocations reflect expected achievement of load allocations requiring reductions in loadings.

(4) For all impaired waterbodies, the implementation plan must be based on a goal of attaining and maintaining the applicable water quality standards within ten years whenever attainment and maintenance within this period is practicable.

(d) TMDTLs must meet all the requirements of paragraphs (b) and (c) of this section, except that, rather than estimating a TMDTL at a level necessary to attain and maintain water quality standards, you must estimate the TMDTL as required by statute at a level

necessary to ensure protection and propagation of a balanced indigenous population of shellfish, fish, and wildlife, taking into account the normal water temperatures, flow rates, seasonal variations, existing sources of heat input, and dissipative capacity of the waterbody for which the TMDTL is being established. Estimates for those waterbodies must include a calculation of the maximum heat input and a margin of safety that takes into account any lack of knowledge concerning the development of thermal water quality criteria.

(e) A TMDL must not be likely to jeopardize the continued existence of an endangered or threatened species listed under section 4 of the Endangered Species Act or result in the destruction or adverse modification of its designated critical habitat.

§ 130.33 How are TMDLs expressed?

(a) A TMDL must contain a quantitative expression of the pollutant load or load reduction necessary to ensure that the waterbody will attain and maintain water quality standards, or, as appropriate, the pollutant load or load reduction required to attain and maintain aquatic or riparian habitat, biological, channel or geomorphological or other conditions that will result in attainment and maintenance of water quality standards.

(b) As appropriate to the characteristics of the waterbody and pollutant, the pollutant load or load reduction may be expressed in one or more of the following ways:

(1) The pollutant load that can be present in the waterbody and ensure that it attains and maintains water quality standards;

(2) The reduction from current pollutant loads required to attain and maintain water quality standards;

(3) The pollutant load or reduction of pollutant load required to attain and maintain aquatic, riparian, biological, channel or geomorphological measures so that water quality standards are attained and maintained;

(4) A quantitative expression of a modification of a characteristic of the waterbody, *e.g.,* aquatic and riparian habitat, biological, channel, geomorphological, or chemical characteristics, that results in a pollutant load or reduction of pollutant load so that water quality standards are attained and maintained; or

(5) In terms of either mass per time, toxicity or other appropriate measure.

§ 130.34 What actions must EPA take on TMDLs that are submitted for review?

(a) EPA must:

(1) Review each TMDL you submit to determine if it meets the requirements of §§ 130.31, 130.32 and 130.33 and issue an order approving or disapproving each TMDL you submit within 30 days after you submit it.

(2) Disapprove the TMDL if it does not meet all those requirements.

(3) Issue an order establishing a new TMDL for a waterbody and pollutant within 30 days of EPA's disapproval or determination of the need for revision, if EPA disapproves a TMDL you submit or determines that an existing TMDL needs to be revised.

(4) Publish this order in the **Federal Register** and a general circulation newspaper and request public comment for at least 30 days.

(5) Issue a subsequent order revising the TMDL after the close of the public comment period, as appropriate, if EPA revises its initial order based on public comment.

(6) Send you the final TMDL EPA establishes. You must incorporate any EPA-established or EPA approved TMDL into your water quality management plan.

(b) When EPA establishes a TMDL it must provide reasonable assurance. It may satisfy the adequate funding requirement of reasonable assurance by conditioning Clean Water Act grants to the fullest extent practicable and in a manner consistent with effective operation of other Clean Water Act programs.

(c) EPA may also use any of its statutory or regulatory authorities and voluntary, incentive-based programs, as it determines appropriate, to supplement conditioning Clean Water Act grants in demonstrating reasonable assurance.

§ 130.35 How will EPA assure that TMDLs are established?

(a) EPA must assure that TMDLs for waterbodies and pollutants identified on Part 1 of your list are established. EPA must do this by:

(1) Working with you to assure that TMDLs are established in accordance with your schedule; and

(2) Establishing a TMDL if you have not made substantial progress in establishing the TMDL in accordance with your approved schedule. Substantial progress means that you have established a TMDL not later than the end of the one-year period during which it was scheduled to be established. EPA must establish the TMDL within two years of the date on which you fail to make substantial progress. The Administrator may extend this period for no more than two years on a case-by-case basis if there is a compelling need for additional time. Notice of such extension shall be published in the **Federal Register**.

(b) EPA may establish TMDLs under other circumstances including:

(1) You request that EPA do so; or

(2) EPA determines it is necessary to establish a TMDL for an interstate or boundary waterbody or to implement Federal water quality standards.

(c) In establishing any TMDL pursuant to this section, EPA shall provide notice and an opportunity for public comment on such order.

Public Participation

§ 130.36 What public participation requirements apply to your lists and TMDLs?

(a) You must provide public notice and allow the public no less than 30 days to review and comment on your list of impaired waterbodies and TMDLs prior to submission to EPA. You should notify directly those who submit a written request for notification.

(b) At the time you make your submission to EPA, you must provide EPA with a summary of all public comments received on your list and TMDLs and your response to all significant comments, indicating how the comments were considered in your final decision.

(c) Prior to your submission to EPA, and at the time that you provide the public the opportunity to review and comment on your list and TMDLs:

(1) You must provide a copy of each of these documents to EPA, the U.S. Fish and Wildlife Service, and to the National Marine Fisheries Service where appropriate (*e.g.,* coastal areas), unless you request EPA to provide these documents to the Services, in which case EPA will do so.

(2) You are encouraged to establish processes with both the U.S. Fish and Wildlife Service and the National Marine Fisheries Service that will provide for the early identification and resolution of threatened and endangered species concerns as they relate to your list and TMDLs. To facilitate consideration of endangered and threatened species in the listing and TMDL process, EPA will ask the U.S. Fish and Wildlife Service and the National Marine Fisheries Service, where appropriate, to provide you and EPA with any comments that they may have on your lists and TMDLs.

(3) You must consider any comments from EPA, the U.S. Fish and Wildlife Service, or the National Marine Fisheries Service in establishing your list and TMDLs and document your consideration of these comments in

accordance with paragraph (b) of this section.

(d) EPA will review any comments submitted by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service and consider how you addressed these and EPA's comments prior to EPA's approval or disapproval of your submission.

TMDLs Established During the Transition

§ 130.37 What is the effect of this rule on TMDLs established during the transition?

(a) EPA will approve any TMDL submitted to it for review before January 11, 2002 or nine months from the effective date of this rule, whichever occurs later, if the TMDL meets either the requirements in § 130.7 in effect prior to July 13, 2000 or the requirements in §§ 130.31, 130.32 and 130.33 of this Subpart C.

(b) EPA will establish TMDLs before Janaury 11, 2002 or nine months from the effective date of this rule, whichever occurs later, either according to the requirements in § 130.7 in effect prior to July 13, 2000 or the requirements in §§ 130.31, 130.32 and 130.33 of this Subpart C.

14. Amend newly designated § 130.50 to revise paragraph (b) introductory text and (b)(3) as follows:

§ 130.50 Continuing planning process

* * * * *

(b) *Content.* The State may determine the format of its CPP as long as the minimum requirements of the CWA and this regulation are met. A State CPP need not be a single document, provided the State identifies in one document (i.e., an index) the other documents, statutes, rules, policies and guidance that comprise its CPP. The following processes must be described in each State CPP and the State may include other processes, including watershed-based planning and implementation, at its discretion.

* * * * *

(3) The process for developing total maximum daily loads (TMDLs) and individual water quality based effluent limitations for pollutants in accordance with section 303(d) of the Act and §§ 130.31 through 130.36 of this Part.

* * * * *

15. Amend newly designated § 130.51 to revise paragraphs (a), (c)(1), and (f) as follows:

§ 130.51 Water quality management plans

(a) *Water quality management plans.* You must base continuing water quality planning on initial water quality management plans produced in accordance with sections 208 and 303(e) of the Clean Water Act and certified and approved updates to those plans. Your annual water quality planning should focus on priority issues and geographic areas identified in your latest section 305(b) reports and have a watershed focus. Water quality planning should be directed at the removal of conditions placed on previously certified and approved water quality management plans and updates to support the implementation of wasteload allocations and load allocations contained in TMDLs.

* * * * *

(c) * * *

(1) *Total Maximum Daily Loads.* TMDLs in accordance with section 303(d) and (e)(3)(C) of the Act and §§ 130.2 and 130.31 through 130.36; also lists of impaired waters in accordance with §§ 130.2 and 130.22 through 130.30.

* * * * *

(f) *Consistency.* Construction grant and permit decisions must be made in accordance with certified and approved WQM plans as described in §§ 130.63(a) and (b). Likewise, financial assistance under the State water pollution control revolving funds may be made only to projects which are in conformity with such plans as specified in section 603(f) of the Act.

* * * * *

§ 130.61 [Amended]

16. Amend newly designated § 130.61 to remove and reserve paragraph (b)(2), and remove paragraph (d).

17. Revise newly designated § 130.64 as follows:

§ 130.64 Processing application for Indian Tribes

The Regional Administrator shall process an application of an Indian Tribe submitted under § 130.51(d) in a timely manner. He shall promptly notify the Indian Tribe of receipt of the application.

[FR Doc. 00–17831 Filed 7–12–00; 8:45 am]

BILLING CODE 6561–12–P

APPENDIX 9

Federal Register

Wednesday,
March 19, 2003

Part VI

Environmental Protection Agency

40 CFR Part 9, et al.
Withdrawal of Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 9, 122, 123, 124, and 130

[WH–FRL–7470–2]

RIN 2040–AD84

Withdrawal of Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: Today's action withdraws the final rule entitled "Revisions to the Water Quality Planning and Management Regulation and Revisions to the National Pollutant Discharge Elimination System Program in Support of Revisions to the Water Quality Planning and Management Regulation ("the July 2000 rule") published in the **Federal Register** on July 13, 2000. The July 2000 rule amended and clarified existing regulations implementing a section of the Clean Water Act (CWA) that requires States to identify waters that are not meeting applicable water quality standards and to establish pollutant budgets, called Total Maximum Daily Loads (TMDLs), to restore the quality of those waters. The July 2000 rule also amended EPA's National Pollutant Discharge Elimination System ("NPDES") regulations to include provisions addressing implementation of TMDLs through NPDES permits. The July 2000 rule has never become effective; it is currently scheduled to take effect on April 30, 2003. Today, EPA is withdrawing the July 2000 rule, rather than allow it to go into effect, because EPA believes that significant changes would need to be made to the July 2000 rule before it could represent a workable framework for an efficient and effective TMDL program. Furthermore, EPA needs additional time beyond April 30, 2003, to decide whether and how to revise the currently-effective regulations implementing the TMDL program in a way that will best achieve the goals of the CWA. The withdrawal of the July 2000 rule will not impede ongoing implementation of the existing TMDL program. Regulations that EPA promulgated in 1985 and amended in 1992 remain in effect for the TMDL program. EPA has been working steadily to identify regulatory and nonregulatory options to improve the TMDL program and is reviewing its ongoing implementation of the existing program with a view toward continuous improvement and possible regulatory changes in light of stakeholder input and recommendations.

DATES: The July 2000 rule amending 40 CFR parts 9, 122, 123, 124 and 130, published on July 13, 2000, at 65 FR 43586, is withdrawn as of April 18, 2003. This rule is considered final for purposes of judicial review as of 1 p.m. eastern time, on April 2, 2003, as provided in 40 CFR 23.2.

ADDRESSES: The complete record for the final rule, Docket ID No. OW–2002–0037, is available for public viewing at the Water Docket in the EPA Docket Center (EPA/DC), EPA West, Room B–102, 1301 Constitution Ave., NW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: For information about today's final rule, contact: Francoise M. Brasier, U.S. EPA Office of Wetlands, Oceans and Watersheds (4503T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, phone (202) 566–2385.

SUPPLEMENTARY INFORMATION:

A. Authority

Clean Water Act sections 106, 205(g), 205(j), 208, 301, 302, 303, 305, 308, 319, 402, 501, 502, and 603; 33 U.S.C. 1256, 1285(g), 1285(j), 1288, 1311, 1312, 1313, 1315, 1318, 1329, 1342, 1361, 1362, and 1373.

B. Entities Potentially Regulated by the Final Rule

TABLE OF POTENTIALLY REGULATED ENTITIES

Category	Examples of potentially regulated entities
Governments	States, Territories and Tribes with CWA responsibilites

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that EPA is now aware could potentially be regulated by this action. Other types of entities not listed in this table could also be regulated. To determine whether you may be regulated by this action, you should carefully examine the applicability criteria in § 130.20 of title 40 of the Code of Federal Regulations. If you have any questions regarding the applicability of this action to you, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

C. How Can I Get Copies of This Document and Other Related Information

EPA has established an official public docket for this action under Docket ID No. OW–2002–0037. The official public docket is the collection of materials that is available for public viewing at the Water Docket in the EPA Docket Center, EPA West, Room B–102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Water Docket is (202) 566–2426. For access to docket materials, please call ahead to schedule an appointment. An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at *http://www.epa.gov/edocket* to view public comments, access the index listing of the contents of the official public docket and to access those documents in the public docket that are available electronically. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility previously mentioned. Once in the electronic system, select "search" and then key in the appropriate docket identification number.

D. Explanation of Today's Action

I. Background

On December 27, 2002, EPA proposed to withdraw final regulations affecting the TMDL program (67 FR 79020) that were published in the **Federal Register** on July 13, 2000 (65 FR 43586). Among other things, the July 2000 rule was intended to resolve issues concerning the identification of impaired waterbodies by promoting more comprehensive inventories of impaired waters. The rule was also intended to improve implementation of TMDLs by requiring EPA to approve, as part of the TMDL, implementation plans containing lists of actions and expeditious schedules to reduce pollutant loadings. Finally, the rule included changes to the NPDES program to assist in implementing TMDLs and to better address point source discharges to waters not meeting water quality standards prior to establishment of a TMDL.

The July 2000 rule was controversial from the outset. Both the proposed and final rules generated considerable controversy, as expressed in Congressional action, letters, testimony and public meetings. Even before it was published in the **Federal Register** on July 13, 2000, Congress prohibited EPA from implementing the final rule through a spending prohibition attached to an FY2000 appropriations bill that prohibited EPA from using funds "to make a final determination on or implement" the July 2000 rule. This spending prohibition was scheduled to expire on September 30, 2001, and, barring further action by Congress or EPA, the rule would have gone into effect 30 days later on October 30, 2001. Because of the continuing controversy regarding the July 2000 rule, EPA proposed on August 9, 2001 (66 FR 41817), and promulgated on October 18, 2001 (66 FR 53044), a new effective date of April 30, 2003, for the July 2000 rule, to allow time for reconsideration of the rule.

Stakeholder concerns were also reflected in legal challenges to the July 2000 rule by a broad array of litigants. Ten petitions for review were filed by States, industrial and agricultural groups, and environmental organizations asserting that many of EPA's revisions to the TMDL regulations were either unlawful under the Administrative Procedure Act or exceeded the Agency's authority under the CWA. These petitions, which identified more than 50 alleged legal defects in the July 2000 rule, were ultimately consolidated in *American Farm Bureau Federation* et al. v. *Whitman* (No. 00–1320) in the United States Court of Appeals for the District of Columbia Circuit. In addition, several other stakeholders have intervened in these lawsuits. The litigation over the July 2000 rule is currently stayed pending EPA's determination regarding whether, and to what extent, that rule should be revised.

In the December 27, 2002, preamble to the proposed withdrawal rule, EPA explained why it had decided to withdraw the July 2000 rule. EPA said that by continuing to examine the regulatory needs of the TMDL and NPDES programs against the impending April 30, 2003, effective date for the July 2000 rule, the Agency was sending confusing signals to the States and other interested parties about which set of rules they should be prepared to implement. Further, because of the significant controversy, pending litigation and lack of stakeholder consensus on key aspects of the July 2000 rule, the Agency said that the July 2000 rule could not function as the blueprint for an efficient and effective TMDL program without significant revisions. Moreover, the Agency said it needed more time to consider whether and how to revise the currently-effective TMDL rules without concern that those efforts would be adversely affected and distracted by the July 2000 rule's impending effective date. In the preamble to the proposed rule, the Agency also explained why it believes that, given the significant progress States have made during the past four years in developing TMDLs, withdrawal of the July 2000 rule will not compromise continuing efforts to implement section 303(d) of the Clean Water Act. EPA's rationale for proposing the withdrawal of the July 2000 rule is more fully explained in the preamble accompanying the proposal (67 FR 79020).

II. Response to Comments and Final Decisions

EPA received approximately 90 separate written comments regarding its proposal to withdraw the July 2000 rule. These comments came from a broad cross-section of stakeholders, including agricultural and forestry groups, business and industry entities and trade associations, State agencies, environmental organizations, professional associations, academic groups and private citizens. An overwhelming majority of the commenters (more than 90 percent) supported EPA's proposed action to withdraw the July 2000 rule. These commenters generally agreed with the Agency's rationale for withdrawing the rule as discussed in the December 27, 2002, preamble. Commenters reiterated EPA's concerns about the potential distraction and confusion caused by the July 2000 rule's impending deadline, as well as the controversy surrounding various provisions of the rule and uncertainty caused by the pending DC Circuit Court litigation. Others stated that the July 2000 rule was no longer needed because of the increased technical guidance that EPA has provided to States to improve the quality of their lists of impaired waters, and the increased funding provided by EPA for developing TMDLs. Many commenters said that States have made significant strides in developing TMDLs since the rule was originally proposed and promulgated and, therefore, the July 2000 rule was not needed. Several commenters stated that allowing the July 2000 rule to go into effect would be disruptive to ongoing TMDL development efforts, and that withdrawing the July 2000 rule would give the Agency additional time to evaluate the need for new TMDL regulations. Some commenters offered additional reasons for supporting withdrawal of the July 2000 rule. Although most of these reasons are consistent with EPA's rationale for withdrawing the July 2000 rule, some are not. For example, some commenters, though supporting EPA's decision to withdraw the July 2000 rule, also questioned the legal soundness of certain provisions of that rule. EPA does not necessarily agree with those comments, and its decision today to withdraw the July 2000 rule should not be understood as an implicit endorsement of those views and comments.

A small minority of commenters (four) disagreed with EPA's proposal to withdraw the July 2000 rule. One commenter asserted that withdrawing the July 2000 rule would "postpone the TMDL program for several more years" and, by removing incentives to reduce pollution, would hinder progress "to implement the TMDL program" and "only make the problem worse." Another commenter said that not going forward with the July 2000 rule would "undermine the momentum of State programs" that have been "waiting to see Federal guidelines to develop programs of their own." EPA does not agree with these comments. Indeed, one State in its comments supporting withdrawal said that the July 2000 rule "would undo much of the momentum and success" of the State's ongoing and successful TMDL program. As described in more detail in the December 27, 2002, preamble, in recent years, EPA and the States have made great strides in implementing the existing 303(d) program to list impaired waters and develop and implement TMDLs to restore impaired waters. States have substantially improved their TMDL programs while the Agency has provided the States with significant increases in technical and financial support to expand and strengthen all elements of their programs. From FY 1999 to 2002, EPA has provided the States almost $30 million for TMDL-specific activities and allowed States to use a portion of State grants for water program administration (CWA section 106 grants) and nonpoint source programs (CWA sections 319 grants) for developing and implementing TMDLs. In addition, since 1998, EPA has spent more than $11 million to support development of technical guidance for developing TMDLs and identifying the most appropriate and efficient best management practices for nonpoint

sources. A complete list of these guidance documents can be found at: *http://www.epa.gov/edocket.*

Helped by these programmatic initiatives, States have made considerable progress in developing TMDLs despite the fact that the July 2000 rule never became effective. As stated in the December 27, 2002, proposal, between 1996 and 1999, EPA and the States established approximately 800 TMDLs. Since then, and despite the fact that the July 2000 rule never became effective, EPA and the States have established more than an additional 7,000 TMDLs; and States continue to improve the pace at which TMDLs are established. Given this progress and the States' adoption since 1998 of schedules for TMDL development, EPA anticipates no reduction in the pace of TMDLs being developed and the associated improvement in water quality, even if the July 2000 rule does not take effect.

One commenter objected to withdrawing the July 2000 rule because of provisions contained in the rule for expanded public involvement in the listing and TMDL development process. By not implementing the July 2000 rule, the commenter asserted that the public remains "shut out" of the listing and TMDL development process, which allows the States to develop impaired waters lists and establish TMDLs "without adequate public scrutiny." EPA disagrees with this comment. While it is true that the July 2000 rule would have clarified, and, in some measure strengthened, the public participation components of EPA's currently-effective TMDL regulations, the current statutory and regulatory provisions (as supplemented by EPA guidance to the States and its Regional Offices) already allow for public scrutiny and participation in the listing and TMDL development process. EPA's existing regulations require that the process for involving the public in a State's listing and TMDL program "shall be clearly described in the State Continuing Planning Process (CPP)" (40 CFR 130.7(a)), and § 130.7(c)(1)(ii) requires that a State's calculations to establish TMDLs be subject to public review, as defined in the State CPP. Additionally, EPA regulations require that when EPA disapproves and establishes a list or a TMDL, EPA must seek public comment (40 CFR 130.7(d)).

EPA's policy has always been that there should be full and meaningful public participation in both the listing and TMDL development process, and EPA has issued guidance in addition to the regulations to support this effort. In EPA's "Guidelines for Reviewing TMDLs Under Existing Regulations Issued in 1992" (May 20, 2002), EPA states that, in addition to the TMDL regulatory requirements, "final TMDLs submitted to EPA for review and approval should describe the State's/tribe's public participation process, including a summary of significant comments and the State's/tribe's responses to those comments." The guidance also states that "provision of inadequate public participation may be a basis for disapproving a TMDL. If EPA determines that a State/tribe has not provided adequate public participation, EPA may defer its approval action until adequate public participation has been provided for, either by the State/tribe or by EPA."

EPA's "Integrated Report" guidance to States, tribes and EPA Regions (Integrated Water Quality Monitoring and Assessment Report (November 19, 2001)) states that "States and territories should provide for full public participation in the development of their Integrated Report prior to its submission to EPA. EPA believes that public understanding of how standard attainment determinations are made for all A[sessement] U[nits]s is crucial to the success of water quality programs and encourages active stakeholder participation in the assessment and listing process.... EPA will consider how the State or territory addressed the comments...when approving or disapproving the 303(d) list of AUs (Category 5)."

Most recently, in May 2002, EPA issued guidance to its Regional Offices stating that when reviewing State 303(d) lists, EPA Regions should review how States provided for public participation to ensure that each State carried out its public participation process consistent with the State's public participation requirements ("Recommended Framework for EPA Approval Decisions on 2002 State Section 303(d) List Submission.") If the Region believes a State has not provided adequate public participation, the guidance provides steps the Region should take in working with a State to provide for additional public participation, and how the State or, if necessary, the Region, should consider and address public comments prior to EPA's approval or disapproval of the list. Finally, it is important to note that nearly all of the States already have public participation requirements under their own State laws for the listing and TMDL development processes, and also provide for public notice.

For all of these reasons, EPA believes that adequate public participation opportunities exist under the currently-effective regulations and that withdrawing the July 2000 rule will not limit meaningful public participation in the listing and TMDL development process.

One commenter stated that, by not implementing the July 2000 rule, States would continue to have inadequate monitoring programs and continue to develop lists of impaired waters based on inadequate data. EPA disagrees. EPA recognizes that no State has a perfect monitoring and listing program. Monitoring and assessment programs are expensive to assemble and implement. While the July 2000 rule would have clarified certain aspects of the existing TMDL regulations regarding listing methodologies, that rule, by itself, would not have provided the additional funding needed by many States to expand their monitoring and assessment programs. Moreover, many of the important listing clarifications and improvements contained in the July 2000 rule have already been provided to, and are currently being implemented by, States, even without the July 2000 rule having gone into effect.

To assist in implementation of the currently-effective TMDL rules, EPA issued the "2002 Integrated Water Quality Monitoring and Assessment Report Guidance" (November 19, 2001) to promote a more integrated and comprehensive system of accounting for the nation's impaired waters. The guidance recommends that States submit an "Integrated Report" that will satisfy CWA requirements for both section 305(b) water quality reports and section 303(d) lists. The objectives of this guidance are to strengthen State monitoring programs, encourage timely monitoring to support decision making, increase numbers of waters monitored, and provide a full accounting of all waters and uses. The guidance encourages a rotating basin approach and strengthened State assessment methodologies, and is intended to improve public confidence in water quality assessments and 303(d) lists. EPA extended the date for submission of 2002 lists by six months (66 FR 53044) to allow States and Territories time to incorporate some or all of the recommendations suggested by EPA in this guidance. Approximately half of the States and Territories have submitted a 2002 report which incorporates some or all of the elements of this guidance. In addition, EPA also held five stakeholder meetings in 2001 and 2002 to review and comment on a best practices guide that EPA was developing for States on consolidated assessment and listing methodologies. This guidance ("Consolidated Listing and Assessment

Methodology—Toward a Compendium of Best Practices") was released in July 2002. EPA is continuing to work with States to clarify and strengthen their monitoring programs and to help improve the quality and credibility of their lists of waters that require a TMDL.

One commenter stated that withdrawing the July 2000 rule would continue "to make EPA and the States the target of numerous lawsuits—resulting in the courts driving environmental policy, rather than EPA and the States." EPA does not agree with this comment. EPA does not agree that there are, in the commenter's words, "weaknesses" with the currently-effective TMDL regulations that make the Agency any more vulnerable to litigation than if it did not withdraw the July 2000 rule. Indeed, we believe withdrawing the July 2000 rule will render moot the pending D.C. Circuit Court challenge to that rule. Before July 2000, EPA was named as defendant in over 30 lawsuits challenging State lists and the pace of State TMDL development. Since July 2000, only a few such lawsuits have been filed, even though the July 2000 rule never became effective. Clearly, the number of such suits has declined as the States and EPA have done a better job under the 1985/1992 TMDL rules to establish lists and TMDLs. In addition, to date only a handful of lawsuits have been filed challenging any of the more than 7,000 TMDLs that the States or EPA have established. Given these numbers, the Agency does not believe there is anything inherently litigation-provoking in the currently-effective TMDL rules and, based on this record, EPA does not believe that withdrawing the July 2000 rule will result in increased TMDL litigation.

One commenter objected to withdrawing the July 2000 rule because of concerns regarding the inconsistent implementation of the program under the currently-effective regulations and EPA guidance. EPA does not agree that inconsistent implementation of the TMDL program is a significant problem. Nor, for that matter, would implementation of the July 2000 rule remove all potential for divergent implementation approaches by the different States and EPA Regions. As discussed previously, since publication of the July 2000 rule, EPA has issued numerous detailed policy memoranda, national guidance documents, technical protocol documents, and information on best management practices so that States can improve their methods to monitor and list impaired waters, and develop and implement TMDLs in a consistent, yet flexible way. A complete list of these guidance documents can be found at *http://www.epa.gov/edocket.* As noted previously, EPA has issued detailed national guidance to EPA Regions on reviewing and approving lists and TMDLs, ("EPA Review of 2002 Section 303(d) Lists and Guidelines for Reviewing TMDLs Under Existing Regulations Issued in 1992" (May 20, 2002)) and is working closely with all the EPA Regional Offices to ensure that their regional review and approval of lists and TMDLs correspond with this national policy. In addition, EPA has recently released a guidance on "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs" (November 22, 2002). This memorandum clarifies EPA's policy on wasteload allocations, specifically that NPDES-regulated storm water discharges must be included in the wasteload allocation component of the TMDL (*see* 40 CFR 130.2(h)) and affirms EPA's view that an iterative, adaptive management BMP approach is appropriate for permitting such discharges.

EPA has also sponsored numerous TMDL and TMDL-related training sessions and meetings to clarify and provide detailed technical support to the States and Regions to help ensure consistency in listing and TMDL development (*see* EPA's website for a complete list of recent activities: *http://www.epa.gov/owow/tmdl/training.*) EPA also has made available to the public the "National TMDL Tracking System" (NTTS), which includes all State-specific data on approved 303(d) lists and approved TMDLs as well as a national summary of impaired waters and TMDLs that have been approved for these waters (*http://www.epa.gov/owow/tmdl/.*) In addition, since the Spring of 2001, EPA has held regular conference calls with EPA Regions and the States to discuss and answer any questions regarding the TMDL program, including technical and policy questions. EPA believes that these guidance documents, the National TMDL Tracking System, training, workshops, and close communication with States and EPA Regional Offices have improved the national consistency in how the TMDL program is implemented at both the Federal and State level, while accommodating the inherent variability in States' water quality standards, land and water characteristics, and available resources.

As to the commenter's point that "there are significant differences between the July 2000 rule and the 1985, 1992 rule * * * [that] cannot adequately be addressed through EPA guidance," EPA notes that its review of the currently-effective TMDL regulations in light of the July 2000 rule is ongoing. EPA has not yet decided what, if any, changes to propose to those regulations. As it continues to consider the need for regulatory changes, EPA will consider the commenter's suggestions regarding which elements belong in regulation and which may be appropriately left to guidance. EPA will also consider the commenter's suggestion that the Agency should allow the public to participate in the development of future program guidance.

One commenter said EPA had not provided enough information to allow it to make a "well-reasoned decision or provide meaningful comment on EPA's proposal to withdraw the July 2000 rule." Nevertheless, that commenter did oppose EPA's proposed action. EPA disagrees with the claim that it did not provide enough information for the public to provide meaningful comment, and given the number of other comments to the proposal addressing EPA's rationale, EPA believes that it adequately discussed its justification for withdrawing the July 2000 rule in the December 27, 2002, preamble.

One commenter opposed withdrawal of the July 2000 rule because it believed that the rule was "necessary" to "aid in the control of nonpoint source pollution." EPA disagrees with this comment. EPA notes that there are numerous existing Clean Water Act authorities and programs, supplemented by other Federal and State programs and initiatives, that address nonpoint source pollution.

One commenter opposed withdrawal of the "TMDL program" because it believed "much time went into the planning of this program to protect waterways * * * [and] it needs to be tied into the NPDES permit program and should be customized to fit individual permits." EPA is not sure it fully understands this comment. To the extent the commenter is opposed to withdrawal of the "TMDL program," EPA notes that it is only withdrawing the July 2000 rule, which has never become effective, and not the TMDL program itself. EPA agrees that it took much planning to develop the July 2000 rule, but, for the reasons already discussed in this preamble and in the December 27, 2002, preamble, EPA has decided to withdraw that rule, regardless of the effort that went into its development. EPA also notes that the currently-effective TMDL program is "tied into the NPDES permit program" in that, among other things, permit

effluent limits must be consistent with the assumptions and requirements of any available wasteload allocation for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7. *See* 40 CFR 122.44(d)(1)(vii)(B). Similarly, 40 CFR 122.4(i) addresses what requirements must be met for a permit to be issued to a new source or new discharger who proposes to discharge a pollutant for which a TMDL has been prepared.

One State commenter, while supporting withdrawal of the July 2000 rule, recommended that as part of this final rulemaking EPA immediately modify 40 CFR 130.7 to require State 303(d) lists every four (instead of every two) years. As EPA continues to consider whether and how to revise the TMDL program, EPA will consider the commenter's suggestion.

One commenter asked for "an evaluation of potential changes from rule making, implementation and funding of Clean Water Act programs and enforcement relative to the Russian River [California] * * * [and an] assurance that this regulatory shift will not result in degradation of either the quality or quantity of our local resources." The commenter did not appear to take a position on the proposed withdrawal of the July 2000 rule, and EPA believes this comment is beyond the scope of the proposal and does not require a response.

One electronic comment merely stated as follows: "We strongly oppose any reduction of restrictions on wetland maintenance." Again, the commenter did not appear to take a position on the proposed withdrawal of the July 2000 rule, and EPA believes this comment is beyond the scope of the proposal and does not require a response.

More than half the commenters requested or encouraged EPA to pursue further rulemaking once the July 2000 rule was withdrawn. Many of these commenters submitted specific recommendations regarding how EPA should structure a new TMDL rule. Some commenters requested that this new rulemaking occur as quickly as possible. One commenter said it "supports EPA's proposed withdrawal of the 2000 rule, assuming that EPA intends to replace that rule in a timely manner with an improved rule now known as the Watershed Rule." Another commenter said it "will only support withdrawal of the July 2000 rule if EPA moves quickly to propose and promulgate a Watershed Rule that provides a comprehensive framework for the evolving TMDL program." Three commenters who supported withdrawal of the July 2000 rule advised against a new rulemaking saying that it "would be disruptive and would only derail State momentum to clean up our waterways." Two other commenters cautioned that a new regulatory proposal "could slow needed progress" and strongly urged the Agency "not to propose any regulatory or other changes that would cripple this vitally important water clean up program."

In response to these comments regarding the future direction of the TMDL program, EPA restates that it has not yet completed its evaluation regarding whether and how to revise the currently-effective TMDL rules. Nor can EPA commit to how long it will take to complete that process. EPA is committed to structuring a flexible, effective TMDL program that States, territories and authorized tribes can support and implement. EPA will carefully consider all of the past and recently-provided commenters' recommendations as it continues to evaluate whether and how to revise the currently-effective TMDL regulations using new regulatory or non-regulatory approaches. EPA, to the best of its ability, will continue to meet and share information with stakeholders regarding this effort, and will provide an opportunity for public comment in a separate **Federal Register** notice if the Agency decides to move forward with a new rulemaking.

After carefully considering all the comments received in response to its December 27, 2002, proposal, EPA is today promulgating a final rule that withdraws the July 2000 rule. EPA is withdrawing the July 2000 rule, rather than allowing it to go into effect, because EPA believes that significant changes would need to be made to the July 2000 rule before it could represent a workable framework for an effective TMDL program. EPA needs additional time beyond April 2003 to decide whether and how to revise the currently-effective regulations implementing the TMDL program in a way that will best achieve the goals of the CWA, and EPA is not sure how long that effort will take. In light of the significant progress States have made in the past three years establishing TMDLs under the currently-effective rules, EPA does not believe that withdrawing the July 2000 rule will impede States' efforts to implement section 303(d) to work towards cleaning up the nation's waters and meeting water quality standards.

Today's final rule does not change any part of the currently effective TMDL regulations promulgated in 1985, as amended in 1992, at 40 CFR part 130 or the NPDES regulations at parts 122—124.

III. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, (October 4, 1993)), EPA must determine whether the regulatory action is "significant" and therefore subject to Office of Management and Budget (OMB) review and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, it has been determined that this rule is a "significant regulatory action." As such, this action was submitted to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

B. Paperwork Reduction Act (PRA)

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR chapter 15.

C. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq.*

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions. For purposes of assessing the impacts of today's rule on small entities, small entity is defined as: (1) A small business based on SBA size standards; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. After considering the economic impacts of today's final rule on small entities, I certify that this action, which withdraws the July 2000 rule that has not taken effect, will not have a significant economic impact on a substantial number of small entities. Like the July 2000 rule, this final rule will not impose any requirements on small entities. This action withdraws the July 2000 rule, which has never taken effect.

D. Unfunded Mandates Reform Act (UMRA) of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, tribal and local governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Like the July 2000 rule, today's final rule, which withdraws the July 2000 rule that has not taken effect, contains no Federal mandates (under the regulatory provisions of title II of the UMRA) for State, local, or tribal governments or the private sector. The final rule imposes no enforceable duty on any State, local or Tribal government or the private sector. Thus, today's rule is not subject to the requirements of sections 202 and 205 of UMRA. For the same reason, EPA has also determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments. This action does not impose any requirement on any entity. There are no costs associated with this action. Therefore, today's rule is not subject to the requirements of section 203 of UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." "Policies that have federalism implications" is defined in the Executive Order to include regulations that have "substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government."

This action does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government as specified in executive Order 13132. It finalizes the withdrawal of the July 2000 rule, which has never taken effect. Thus, Executive Order 13132 does not apply to this rule.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications." "Policies that have tribal implications" is defined in the Executive Order to include regulations that have "substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes."

This final rule does not have tribal implications. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. It withdraws the July 2000 rule, which has never taken effect. Thus, Executive Order 13175 does not apply to this rule.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) is determined to be "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, EPA must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by EPA. This final rule is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866.

H. Executive Order 13211: Energy Effects

This rule is not a "significant energy action" as defined in Executive Order 13211, "Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use," (66 FR 28355; May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy. This rule simply finalizes the withdrawal of the July 2000 rule which has never taken effect. We have concluded that this rule is not likely to have any adverse energy effects.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104–113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This final rulemaking does not impose any technical standards. Therefore, EPA is not considering the use of any voluntary consensus standards.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective on April 18, 2003.

List of Subjects

40 CFR Part 9

Environmental protection, Reporting and recordkeeping requirements.

40 CFR Part 122

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous substances, Reporting and recordkeeping requirements, Water pollution control.

40 CFR Part 123

Environmental protection, Administrative practice and procedure, Confidential business information, Air pollution control, Hazardous waste, Indians-lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Water pollution control.

40 CFR Part 124

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous waste, Indians-lands, Reporting and recordkeeping requirements, Water pollution control, Water supply.

40 CFR Part 130

Environmental protection, Grant programs—environmental protection, Indians-lands, Intergovernmental relations, Reporting and recordkeeping requirements, Water pollution control, Water supply.

The authority citation for part 130 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*

For the reasons stated in the preamble, EPA withdraws the final rule amending 40 CFR parts 9, 122, 123, 124 and 130 published July 13, 2000 (65 FR 43586).

Dated: March 13, 2003.

Christine T. Whitman,

Administrator.

[FR Doc. 03–6574 Filed 3–18–03; 8:45 am]

BILLING CODE 6560–50–P

APPENDIX 10

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

SEP 11 2008

The Honorable John Griffin, Secretary
Maryland Department of Natural Resources
Tawes State Office Building
580 Taylor Avenue
Annapolis, Maryland 21401

Dear Secretary Griffin:

Thank you for your August 22, 2008 letter to Mr. Jon Capacasa regarding the Chesapeake Bay Total Maximum Daily Load (TMDL). The purpose of this letter is to provide the Chesapeake Bay Program's Principals' Staff Committee (PSC) with the U.S. Environmental Protection Agency (EPA) Region III's responses (after consultation with EPA Region II and Headquarters) to the questions posed in your letter.

As you are aware, EPA is establishing a Federal TMDL for the Chesapeake Bay watershed because the water quality goals set forth in the Chesapeake 2000 Agreement will not be met by 2010. This TMDL will satisfy the requirements of both the 1999 Virginia consent decree and the 2000 District of Columbia consent decree. EPA is committed to making this TMDL an effective tool to help accelerate restoration of the Bay consistent with Sections 117 and 303 of the Clean Water Act (CWA). EPA intends for this TMDL to fairly and transparently allocate nutrient and sediment loads and provide accountability for the basin-wide reductions necessary to achieve water quality standards.

EPA recognizes that the Chesapeake Bay TMDL will be the latest tool to build on decades of research, strategies, and voluntary and regulatory actions by Bay Program partners to restore the Bay. Given our ever-increasing scientific understanding, significant past investment of resources and the continuing public and political support for Bay restoration, EPA is committed to establishing a TMDL that is informed by prior and ongoing efforts and will provide a clear roadmap for our joint efforts to save the Bay. The Agency is developing this TMDL with heightened expectations for its level of scientific rigor and its ability to demonstrate that all nutrient and sediment allocations can and will be met. Because of the unprecedented amount of work in the Bay prior to the development of this TMDL, EPA believes that the Bay partners already have significant knowledge regarding needed implementation mechanisms that goes far beyond the usual level of information generally available when developing TMDLs. Therefore, expectations for the Bay TMDL are not applicable to the TMDL program in general.

Two points need to be made on the overall framework of the TMDL. First, while the TMDL is a powerful tool in the restoration of our nation's waters, it alone will not be sufficient to assure appropriate controls for the restoration of the Bay are in place in a timely manner. For this reason, EPA expects to work with the states and the District of Columbia to develop not only this TMDL, but also the necessary implementation plans, commitments, and evaluations of programs to ensure that our partner states and the District of Columbia will together undertake timely and effective pollution controls to restore the Chesapeake Bay. Second, EPA will use the TMDL to promote transparency and accountability in our partners' common quest to accelerate the restoration of the Chesapeake Bay.

Enclosure A provides EPA Region III's responses to the questions that you posed in your August 22, 2008 letter, and Enclosure B provides additional clarification on EPA's expectations for the Chesapeake Bay TMDL. If you have any questions concerning these positions, please contact Mr. Jon M. Capacasa, Director, Water Protection Division, at (215) 814-5422 or Mr. Robert Koroncai, Associate Director, Office of Standards, Assessment and TMDLs, at (215) 814-5730.

Sincerely,

Donald S. Welsh

Donald S. Welsh
Regional Administrator

ENCLOSURE A

RESPONSE TO QUESTIONS DIRECTED TO EPA REGION III

What jurisdictions will be within the formal TMDL, and which will be outside of the TMDL?

The purpose of a TMDL is to provide the pollution budget necessary to achieve applicable state-established and EPA-approved water quality standards. While the TMDL will identify allowable pollutant loadings to assure compliance with state water quality standards in the impaired waters of the Chesapeake Bay and its tidal tributaries, the Bay Program's extensive monitoring, assessment and modeling data have established that about one-half of the nitrogen and more than one-quarter of the phosphorus loads entering the Bay's tidal waters come from sources in upstream states (Pennsylvania, New York and West Virginia). Because these upstream states are significant contributors of nutrients and sediments to these impairments, EPA is including Maryland, Virginia, Delaware, Pennsylvania, New York, West Virginia, and the District of Columbia in the Chesapeake Bay TMDL.

What does it mean for jurisdictions to be outside the TMDL? Specifically, what are the requirements of states that are outside the TMDL?

This question is no longer relevant since EPA will include all Bay watershed states in the TMDL.

What is EPA's definition of "reasonable assurance," both for TMDLs in general and its specific expectations for "reasonable assurance" provisions in the Bay TMDL?

Neither the Clean Water Act nor EPA's regulations provide a definition of "reasonable assurance." The regulations do provide that less stringent wasteload allocations for point sources must be based on practicable load allocations for nonpoint sources and that EPA must find that TMDLs will implement water quality standards in order to approve them. EPA's *Guidelines for Reviewing TMDLs Under Existing Regulations Published in 1992* (2002) provides guidance on when a TMDL must include reasonable assurance provisions:

> When a TMDL is developed for waters impaired by point sources only, the issuance of a National Pollutant Discharge Elimination System (NPDES) permit(s) provides the reasonable assurance that the wasteload allocations contained in the TMDL will be achieved. This is because 40 C.F.R. 122.44(d)(1)(vii)(B) requires that effluent limits in permits be consistent with "the assumptions and requirements of any available wasteload allocation" in an approved TMDL.
>
> When a TMDL is developed for waters impaired by both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur, EPA's 1991 TMDL Guidance states that the TMDL should provide reasonable assurances that nonpoint source control measures will achieve expected load reductions in order for the TMDL to be approvable. This information is necessary for EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards.

Over the course of approving or establishing more than 30,000 TMDLs, EPA has encountered a broad spectrum of acceptable reasonable assurance demonstrations. In light of some recent court decisions and higher scrutiny of the relationship between TMDLs and NPDES

permits, EPA is engaging in an effort to further refine the concept of reasonable assurance and expects to complete that work in FY 2009. In the meantime, EPA is moving forward with the expectation that this nationally-significant point-nonpoint source TMDL will be supported by documentation showing that nonpoint source control measures for nutrients and sediment in the Bay watershed can and will achieve expected load reductions.

More information on EPA Region III's specific expectations for reasonable assurance in the Bay TMDL is included in response to the following question.

Noting that the Principals' Staff Committee (PSC) has stated for the record that it wants the Bay TMDL to be a model for TMDLs nationwide, what are EPA's expectations for reasonable assurance in the Bay TMDL?

EPA Regions II and III, our partner states and the District are committed to accelerating restoration of the Chesapeake Bay and its tributaries, and EPA Region III believes that reasonable assurance provisions in the Bay TMDL will provide one mechanism to increase the likelihood that actions are taken to reduce nutrient and sediment loads. However, EPA Region III does not believe that implementation of the Bay TMDL depends solely on reasonable assurance or any other single TMDL element. Rather, EPA Region III is committed to working with the States and the District to develop and execute a broader implementation framework that draws on elements in the TMDL itself (including reasonable assurance), as well as additional implementation-related information that will accompany the TMDL. For example, implementation measures and milestones might be addressed in jurisdictions' revised tributary strategies attached to the TMDL or in a separate and more comprehensive TMDL implementation plan endorsed by all the States and the District. Based on input from the PSC Reasonable Assurance Workgroup, EPA expects each of the TMDL states and the District to work with Region III to develop the following information as part of its reasonable assurance and implementation framework:

1. Identify the controls needed to achieve the allocations identified in the proposed TMDL through revised state tributary strategies.

2. Identify the current state and local capacity to achieve the needed controls (i.e. an assessment of current point source permitting/treatment upgrade funding programs and nonpoint source control funding, programmatic capacity, regulations, legislative authorities, etc.).

3. Identify the gaps in current programs to achieve the needed controls (additional incentives, state or local regulatory programs, market-based tools, technical or financial assistance, new legislative authorities required, etc.).

4. A commitment from each state and the District to work to systematically fill the identified gaps to build the program capacity needed to achieve the needed controls. As part of this commitment, the states and the District would agree to meet specific, iterative,

and short-term (1-2 year) milestones demonstrating increased levels of implementation and/or nutrient and sediment load reductions.

5. A commitment to continue efforts underway to expand monitoring, tracking and reporting directed towards assessing the effectiveness of implementation actions and use these data to drive adaptive decision-making and redirect management actions.

6. Agree that if jurisdictions do not meet these commitments, additional measures will be necessary.

EPA Region III believes that this framework will provide information and commitments sufficient to support EPA's expectations for the Bay TMDL. EPA Region III looks forward to continuing to work with the PSC's Reasonable Assurance Workgroup to further develop the details of this approach and determine what aspects of the framework will be within or will accompany the TMDL.

What are the ramifications of failing to provide adequate reasonable assurance?

Rather than focusing at this time on potential failure to provide reasonable assurance, EPA Region III believes that energy should be directed at demonstrating upfront that there is adequate reasonable assurance the TMDL's allocations will be met and accelerating implementation of actions to reduce nutrient and sediment loads to the Bay. The Agency proposes that the creative talents of the Bay partnership be applied to finding policy and management solutions to the nonpoint source challenge such that reasonable assurance can be demonstrated for this TMDL upon its issuance.

We would like to see the Workgroup evaluate several models for assuring that nonpoint source pollution reductions will be achieved. These existing models include but are not limited to:

- The Coastal Zone Management Act approval process for management plans (NOAA and EPA share the specific review approach).

- Clean Air Act conformity determinations to qualify for state or federal funding based upon a state-wide implementation plans that are issued for public review.

- Virginia's 1997 Water Quality Monitoring, Information and Restoration Act which directs the State Water Control Board to "develop and implement a plan to achieve fully supporting status for impaired waters" (Section 62.1-44.19.7).

- Maryland's Smart Growth Model whereby targeted growth areas are identified and investments of state funds are directed only within those targeted areas.

- The incorporation of state nonpoint source management plans by watershed into state water quality management regulations.

EPA Region III suggests that the PSC Reasonable Assurance Workgroup explore how these and other models might satisfy reasonable assurance provisions and accelerate implementation of actions to reduce nutrient and sediment loads to the Bay.

The Clean Water Act acknowledges potential permitting consequences for point sources if the record does not demonstrate that necessary nonpoint source reductions will occur. CWA 301(b)(1)(C) requires that in addition to reflecting technology-based requirements, effluent limits for point sources must contain "any more stringent limitations, including those necessary to meet water quality standards." Chapter 2 of EPA's 1991 TMDL Guidance states:

> Under the CWA, the only federally enforceable controls are those for point sources through the NPDES permitting process. In order to allocate loads among both nonpoint and point sources, there must be reasonable assurances that nonpoint source reduction will in fact be achieved. Where there are not reasonable assurances, under the CWA, the entire load reduction must be assigned to point sources (p. 15).

There is authority under the CWA to require that tighter effluent limitations be applied to point sources where it cannot be demonstrated that water quality standards will be met without such limits. However, EPA acknowledges the large scale public investments (estimated at over $4 billion) that are now being carried out throughout the watershed to upgrade and reduce nutrient discharges from point sources. A stable regulatory environment is a priority need for these facilities and a matter of fiduciary responsibility and public trust. Therefore, EPA considers requiring further point source upgrades to the limits of technology as an option of last resort and is avoidable if the Bay partners use our creative energies to deliver sufficient nonpoint pollutant reduction commitments.

ENCLOSURE B

ADDITIONAL CLARIFICATION FROM EPA REGION III

What is an appropriate schedule for the development of the Chesapeake Bay TMDL?

Under the Virginia Consent Decree, the Chesapeake Bay TMDL must be established by no later than May 1, 2011. The PSC has agreed to an accelerated schedule of December 31, 2010. EPA will commit its best efforts to issue the TMDL by this earlier date, but our first priority is to develop a TMDL that fulfills all necessary legal requirements and is an effective tool to accelerate Bay restoration. To meet the accelerated December 2010 timeframe, EPA will propose a revised, detailed schedule to the Chesapeake Bay Program's Water Quality Steering Committee and the PSC.

How finely will the Chesapeake Bay TMDL allocate loadings to various sources?

EPA Regions II and III will continue to work with our state and District partners and others to develop the total allowable load of nutrients and sediments for the entire Chesapeake Bay and its tidal tributaries. We will also work with our partners to allocate allowable loads to each of the six watershed states and the District by the major tributary basins. The Regions expect that the six states and the District will then refine their tributary strategies to identify controls that are needed to achieve the allocated loading. Before the TMDL is formally completed, EPA Regions II and III intend to use these tributary strategies as the basis of any allocations to point and nonpoint sources in the Chesapeake Bay TMDL.

EPA Region III will strive for a scale of allocation that will yield the highest chance of success in implementing the needed pollution controls. While our partner states and the District are unified by a common goal to restore the Bay, each has a tailored approach to achieve controls necessary for restoration. These approaches are identified in their respective tributary strategies and current water pollution control programs. EPA Region III will tailor the TMDL approach for establishing allocations to the unique nature of each state program. Furthermore, EPA has different expectations for allocations for tidal and non-tidal states.

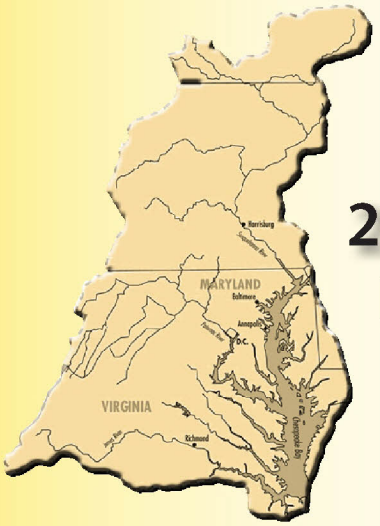
The tidal states (Maryland, Virginia and Delaware), the District and EPA Region III have agreed that the TMDL should contain detailed load allocations (LAs) and wasteload allocations (WLAs) designed to achieve water quality standards for the impaired waters of the Bay and its tidal tributaries. EPA Region III expects to include individual WLAs and sector LAs in the final Chesapeake Bay TMDL sufficient to achieve and maintain water quality standards in the Bay and its tidal tributaries. Using the Chesapeake Bay airshed, watershed and water quality/sediment transport models, EPA will confirm that the proposed allocations for these tidal water jurisdictions, along with allocations to the other states, will attain water quality standards in the Chesapeake Bay and its tidal tributaries. At a minimum, EPA Region III intends to identify in the TMDL the individual facility point source WLAs and aggregate nonpoint source LAs for each nonpoint source sector. EPA's preference is to further subdivide the load allocations into

smaller geographic units that would facilitate implementation of other point and nonpoint source controls (i.e., conservation district, county, and/or watershed level suballocations). EPA Region III intends to work with the tidal states and DC to derive a scale of point and nonpoint source allocations that works best in each jurisdiction.

For non-tidal states (Pennsylvania, New York and West Virginia), EPA Regions II and III expect that revised tributary strategies prepared by these states will provide necessary transparency and specificity regarding the nature of the controls anticipated by the state to achieve any aggregate allocated loading limits specified by the TMDL. The extensive scientific understanding that has been developed in establishing this TMDL should provide an unprecedented opportunity for EPA and the non-tidal states to finely target specific pollutant controls and track their effectiveness in meeting water quality standards. The Regions expect that this information will inform the respective states' tributary strategies.

At a minimum, EPA Region III intends to establish gross WLAs and gross LAs for each major basin in the non-tidal states in the Bay TMDL. These gross allocations would be based upon the point and nonpoint controls identified in the respective state tributary strategy. EPA recognizes that tributary strategies prepared by our partner states should provide the needed transparency on the planned controls by the state to achieve their aggregate allocated loading. It will be necessary for each non-tidal state to provide, no later than June 2010, a detailed draft tributary strategy containing information on allocations to a level of detail similar to the tidal states. The Bay models will be utilized to confirm that the allocation of loadings is sufficient to attain water quality standards. If ongoing efforts to place point source nutrient controls in NPDES permits are found to be insufficient for a state, or at a state's request, EPA Regions II and III may include WLAs for individual sources within that state in the Bay TMDL. Regardless of how the allocations are established in the TMDL, the EPA Regions expect to include each state tributary strategy as an attachment to the TMDL as part of the record of decision supporting the TMDL allocations.

APPENDIX 11



2011 Milestones for Reducing Nitrogen and Phosphorus

Chesapeake Bay Program
A Watershed Partnership

Introduction to Milestones

In the past, the Chesapeake Bay Program has set one overall pollution reduction goal for cleaning up the Bay a decade or more in the future. But this approach was like a ladder without rungs – it did not include the incremental, short-term goals needed for steady progress in reducing pollution.

Now the partnership will use short-term goals to increase restoration work, called milestones. Every two years, the six states and D.C. will meet milestones for implementing measures to reduce pollution from nitrogen and phosphorus, with the first milestone on December 31, 2011.

By meeting the 2011 milestones, an additional 6.9 million pounds of nitrogen will be reduced in the watershed, which is a 77 percent increase over the previous rate of progress. For phosphorus, an additional 463,948 pounds will be reduced watershed-wide, which is a 79 increase over the previous rate of progress.

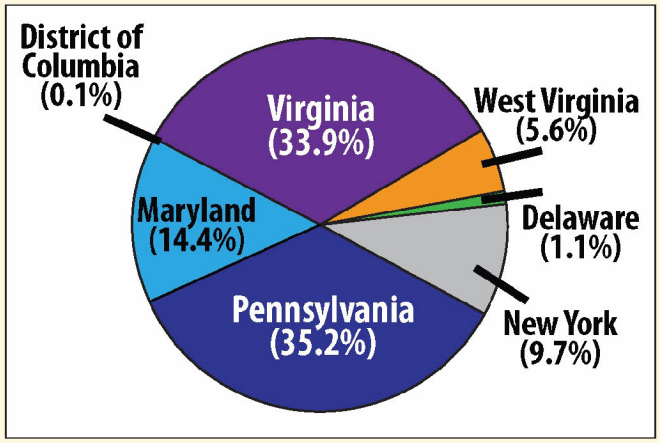
Milestone Fact Sheets

These fact sheets present 2011 milestones for all jurisdictions and contain common elements:

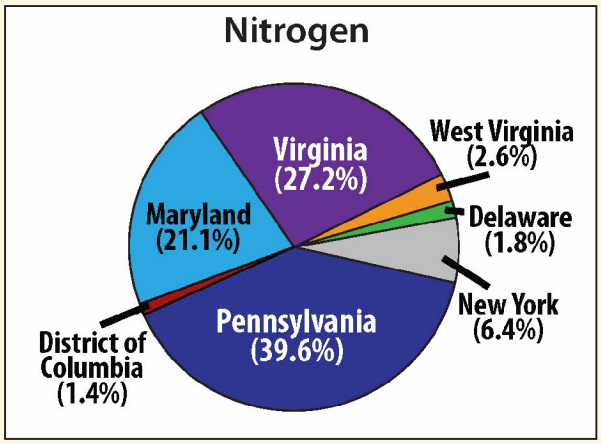
- **Reduction Milestone:** These tables show the amount of pollution the jurisdiction will reduce.
  - *Maryland, Pennsylvania and Virginia:* The table shows what the state would have reduced at its previous rate of progress and the amount of pollution that will be reduced by meeting the 2011 milestone. Comparing these numbers shows the increase in the pace of cleanup.
  - *Delaware, New York and West Virginia:* The limited implementation data record in the Phase 4.3 Watershed Model prevents the same jurisdiction-specific comparisons between previous rates of progress and milestone rates of progress for Delaware, New York and West Virginia.
  - *District of Columbia:* The District has met its phosphorus reduction goal and will meet its nitrogen goal when the Blue Plains facility upgrades treatment in 2015.
- **Pollution Reductions by Source:** These charts show from what sources the jurisdiction will achieve the reductions.
- **Funding During Milestone Period:** This box displays the projected funding that will be used to implement pollution reduction measures through 2011.
- **Pollution Reduction Actions by End of 2011:** These are the actions the jurisdiction will take to reduce pollution to meet its milestones.
- **Additional Reduction Options:** These are options for reducing pollution that a jurisdiction could pursue if necessary to meet its milestones.

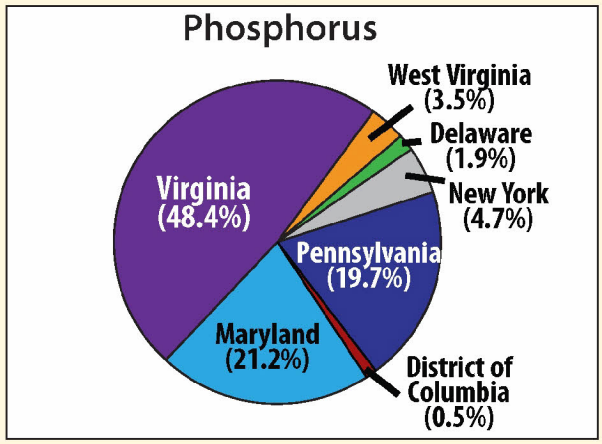
For more, visit www.chesapeakebay.net or call 1-800-YOUR BAY

Percentage of Total Watershed Acreage

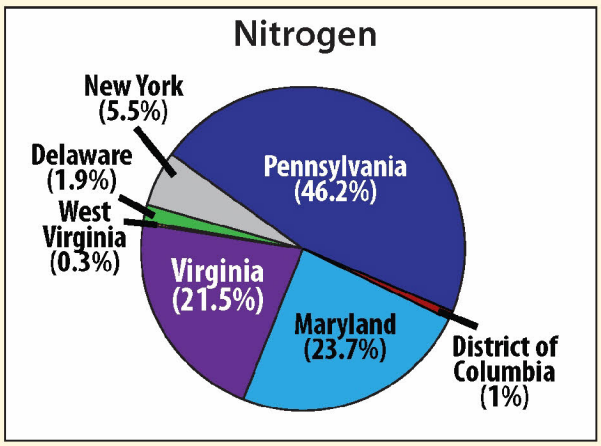


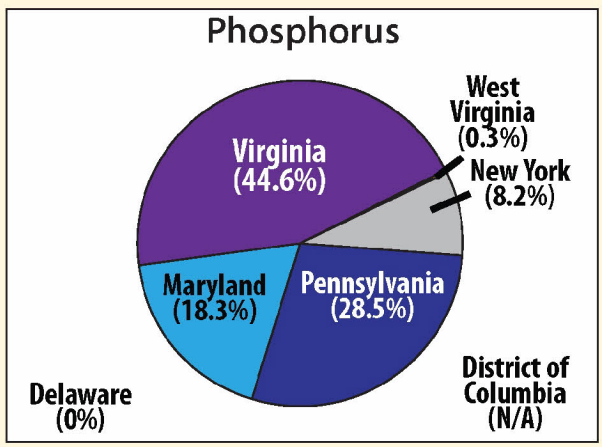
Percentage of Pollution Delivered by Each Jurisdiction





Percentage of Milestone Load Reductions from Each Jurisdiction



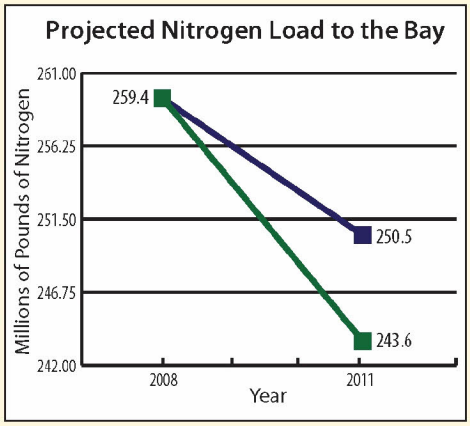


Watershed-Wide

Total of 2011 Milestones to Reduce Nitrogen and Phosphorus

Chesapeake Bay Program
A Watershed Partnership

Nitrogen Reduction Milestones

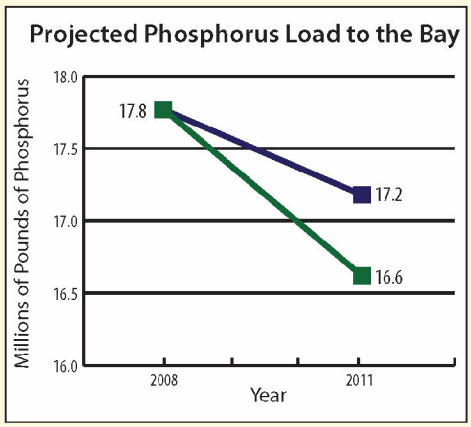


By meeting the 2011 milestones, the amount of nitrogen entering the Bay will decrease by 15.8 million pounds, which is 6.9 million pounds more than at the previous rate of progress -- a 77 percent increase.

	Projected*
Reduction at Previous Rate of Progress	8.9M
Pollution Load after Previous Rate of Progress	**250.5M**
Reduction at Milestone Rate of Progress	15.8M
Pollution Load after Milestone Rate of Progress	**243.6M**
Increase in Rate of Progress	**77%**

M = Millions of Pounds of Nitrogen

Phosphorus Reduction Milestones

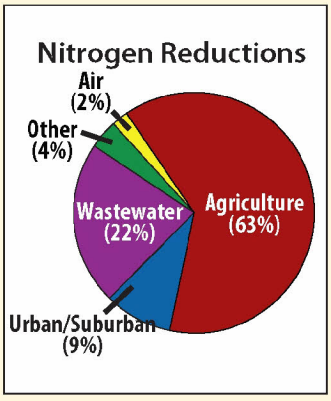


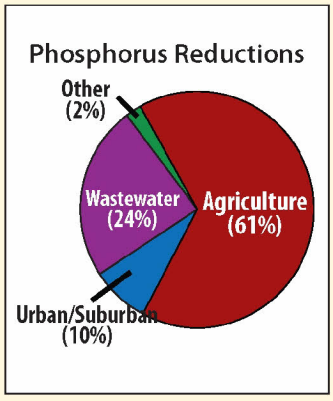
For phosphorus, the amount entering the Bay will decrease by 1.05 million pounds, which is 463,948 pounds more than at the previous rate of progress – a 79 increase.

	Projected*
Reduction at Previous Rate of Progress	586,681 lbs.
Pollution Load after Previous Rate of Progress	**17.2M**
Reduction at Milestone Rate of Progress	1.1M
Pollution Load after Milestone Rate of Progress	**16.6M**
Increase in Rate of Progress	**79%**

M = Millions of Pounds of Phosphorus

Pollution Reductions by Source





Funding During Milestone Period

Delaware	**$17M**
District of Columbia	$266M
Maryland	**$774M**
New York	$15.2M
Pennsylvania	**$67.5M**
Virginia	$1,195.2M
West Virginia	**$22M**
TOTAL	**$2,356,900,000**

* Nitrogen and phosphorus reductions are based on Phase 4.3 Watershed Model data for agricultural, urban/suburban and air reductions and monitored data for wastewater reductions.

For more, visit www.chesapeakebay.net or call 1-800-YOUR BAY

AR0033937

Pollution Reduction Actions by End of 2011

Agriculture

Nutrient Management	1,082,251 acres
Conservation Tillage	306,991 acres
Cover Crops	652,152 acres/year
Pasture Grazing BMPs	168,800 acres
Streamside Forest Buffers	39,110 acres
Streamside Grass Buffers	14,910 acres
Forest Harvesting Practices	125 acres
Wetland Restoration	3,809 acres
Land Retirement	81,676 acres
Tree Planting	27,965 acres
Carbon Sequestration/Alternative Crops	25,740 acres
Conservation Plans/SCWQP	584,648 acres
Animal Waste Management Systems	1,016 systems
Mortality Composters	22 systems
Water Control Structures	25,000 acres
Horse Pasture Management	300 acres
Non-Urban Stream Restoration	232,088 feet
Poultry Phytase	19,626 fewer pounds phosphorus
Manure Transport	131,503 net tons
Dairy Precision Feeding and/or Forage Management	291,203 pounds N/51,264 pounds P
Heavy Use Poultry Area Concrete Pads	400 farms
Livestock and Poultry Waste Structures	198 structures
Dairy and Poultry Manure Incorporation Technology	5,000 acres

Wastewater

1,887,350 pounds nitrogen reduced	
201,500 pounds phosphorus reduced	

Urban/Suburban

Urban Stormwater Management	148,740 acres
Tree Planting	30 acres
Urban Stream Restoration	18,656 feet
Erosion and Sediment Control	62,731 acres
Nutrient Management	133,000 acres
Wetland Restoration	350 acres
Abandoned Mine Reclamation	2,219 acres
Dirt and Gravel Road Erosion	124,913 feet
Septic Improvements	27,125 systems

Air

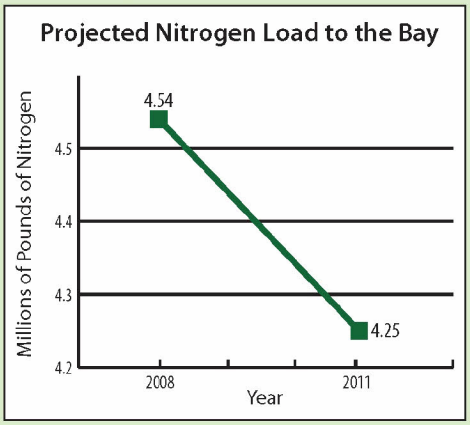
Heavy Truck Anti-Idling Rule	9.78M hours reduced
NOx Reductions	56,000 tons
Maryland Healthy Air Act	305,882 fewer pounds nitrogen/year

Delaware

2011 Milestones to Reduce Nitrogen and Phosphorus

Chesapeake Bay Program
A Watershed Partnership

Nitrogen Reduction Milestone



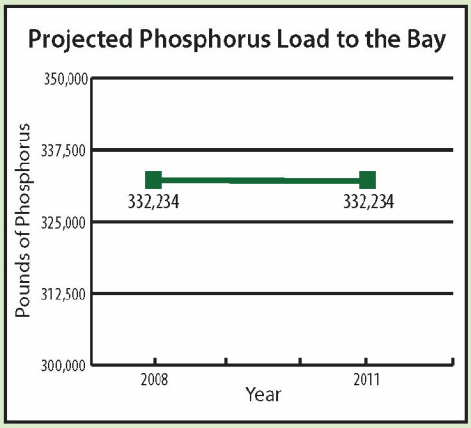
Delaware's 2011 milestone commitment is to reduce nitrogen by 292,072 pounds by the end of the three-year period (2009-2011).

	Projected**
Reduction at Milestone Rate of Progress	**292,072 lbs.**
Pollution Load after Milestone Rate of Progress	**4.25M**

M = Millions of Pounds of Nitrogen

* Based on model estimates of reductions achieved through implementing specific non-point source actions (listed on back) and utilizing permitted point source loads to account for potential growth, Delaware will fall 264,229 pounds short of its nitrogen milestone load goal. To address this shortfall, Delaware will explore additional pollution reduction options (see back).

Phosphorus Reduction Milestone

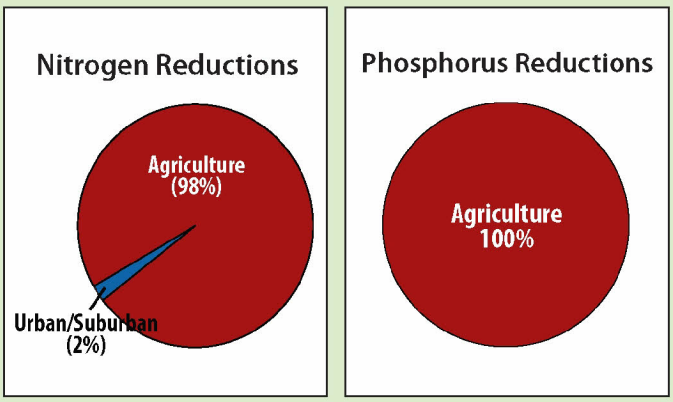


Since 2000, Delaware has fully implemented many effective phosphorus-reducing agricultural practices and now must focus on other practices to achieve the nonpoint source reduction goal, which may show a slower rate of progress. As a combined result of decreased rates of non-point reductions and utilizing permitted point source loads to account for potential growth, Delaware plans to maintain phosphorus loads at 2008 levels through this first milestone period.

	Projected**
Reduction at Milestone Rate of Progress	**0 lbs.**
Pollution Load after Milestone Rate of Progress	**332,234 lbs.**

* Based on model estimates of reductions achieved through implementing specific non-point source actions (listed on back) and utilizing permitted point source loads to account for potential growth, Delaware will fall 5,958 pounds short of its phosphorus milestone load goal. To address this shortfall, Delaware will explore additional pollution reduction options (see back).

Pollution Reductions by Source



Funding During Milestone Period

CBP Implementation Grant	$2M
319 Nonpoint Source Funds	$1.392M
106 Funds	$120,000
Farm Bill-NRCS EQIP	$3M
State Water Pollution Control Revolving Funds (including 2009 Recovery Act funds)	$4.5M
State General Funds	$3.836M
Community Water Quality Improvement Grant	$150,000
Private Landowner Match for Agricultural BMPs	$1.95M
TOTAL	**$16.948M**

** Nitrogen and phosphorus reductions are based on Phase 4.3 Watershed Model data for agricultural and urban/suburban reductions and permitted data for wastewater loads.

For more, contact: Jennifer Volk, (302) 739-9939, jennifer.volk@state.de.us

Pollution Reduction Actions by End of 2011

Agriculture

Cover Crops Late Planting	18,600 acres/year
Cover Crops Early Planting	18,600 acres/year
Forest Buffers	2,700 acres
Wetland Restoration	420 acres
Tree Planting	200 acres
Poultry Litter Transport	55,100 tons/year
Nutrient Management	177,000 acres

Urban/Suburban

On-Site Pumpouts	8,800 systems/year

Wastewater

Reduction of Invista's Permitted Load	215,350 lbs. nitrogen

Additional Reduction Options

Agriculture

Maintain/increase acres of grass buffers

Use Farm Bill to fund five priority BMPs through EQIP in the Nanticoke and Choptank watersheds

- Cover Crops
- Heavy Use Area Protection
- Irrigation Water Management
- Nutrient Management
- Manure Transfer

Urban/Suburban

On-site wastewater voluntary upgrades and elimination through sewer connections

Stormwater BMPs in new developments; retrofits and installation of BMPs in existing urban areas

Review of all new development in the Chesapeake (of a certain size threshold) using the Nutrient Budget Protocol to determine land use change impacts on nutrient loadings

Explore creating and reviewing regulations and ordinances:

- Riparian buffers (promulgate new regulation for the Nanticoke Watershed within Sussex County; revise existing ordinance in Kent County)
- Advanced stormwater treatment through revised regulations
- Standards and measures for on-site wastewater treatment disposal systems through revised regulations

Other

Improve data tracking and reporting systems to more accurately reflect progress to date

Conduct BMP data and/or efficiency studies/reviews to allow more informed decisions on future BMP implementation

- Reductions associated with irrigation management
- Reductions associated with sediment trapping in ditches
- Reductions resulting from poultry house decommissioning
- Reductions related to road improvements that could result from stimulus projects
- Effectiveness of nutrient management planning in Delaware
- High P-soils mapping
- GIS analyses to produce maps of areas where BMPs should occur

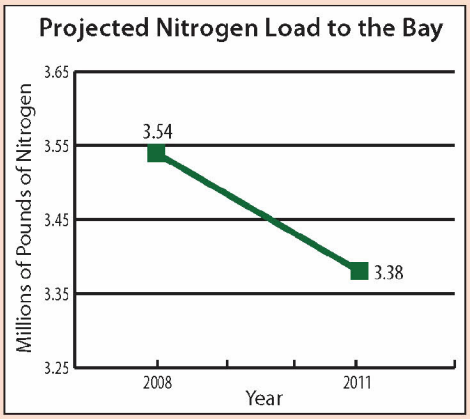
For more, contact: Jennifer Volk, (302) 739-9939, jennifer.volk@state.de.us

District of Columbia

2011 Milestones to Reduce Nitrogen and Phosphorus

Chesapeake Bay Program
A Watershed Partnership

Nitrogen Reduction Milestone



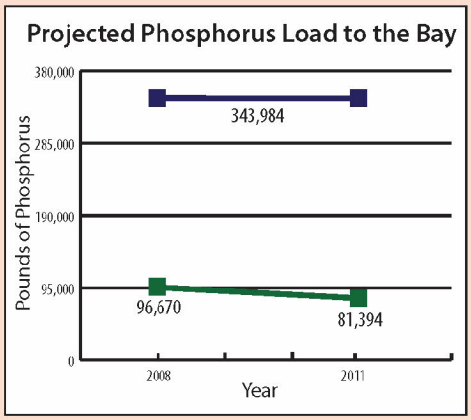
The District of Columbia's 2011 milestone commitment is to reduce nitrogen by 159,000 pounds by the end of the three-year period (2009-2011).

	Projected*
Reduction at Milestone Rate of Progress	159,000 lbs.
Pollution Load after Milestone Rate of Progress	3.38M**

M = Millions of Pounds of Nitrogen

** The District will likely meet its nitrogen reduction commitment in 2015. However, because of requirements to construct Enhanced Nutrient Removal at the Blue Plains wastewater treatment plant, for this milestone period the nitrogen loadings will increase temporarily. The next phase of two-year milestones (2011-2013) will reflect the changes at Blue Plans and will result in decreasing nitrogen loads (see back for more information).

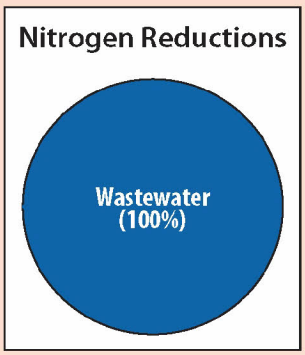
Phosphorus Reduction Milestone



The District of Columbia has already achieved its phosphorus reduction goal of 343,984 pounds. In 2008, the District's phosphorus load was 96,670 pounds*.

2003 Phosphorus Reduction Goal	343,984 lbs.
2008 Phosphorus Load*	96,670 lbs.
2011 Projected Phosphorus Load*	81,394 lbs.

Pollution Reductions by Source



Funding (FY 2010 and FY 2011)

MS4 Funds	$26.15M
Non-Point Control	$7.09M
Point Source (BTN)	$85.77M
CSO Funds	$147M
TOTAL	**$266M**

* Nitrogen and phosphorus reductions are based on Phase 4.3 Watershed Model data for urban/suburban reductions and monitored data for wastewater reductions.

For more, contact: Diane Davis, (202) 741-0847, diane.davis2@dc.gov

Non-Point Source Pollution Reduction Actions by 2011

While wastewater from Blue Plains constitutes the majority of nutrient loadings to the Potomac River, the District is very aggressively tackling other pollutant sources through its innovative non-point source programs. The District is addressing other equally critical pollutants such as: controlling/mitigating thousands of pounds of urban stormwater runoff, containing thousands of pounds of trash, and increasing urban tree canopy by many thousands of acres. All together, these activities will contribute significantly to controlling urban sources of pollutants in this milestone period and beyond.

Expand Urban Tree Canopy

Plant 4,150 trees (30 acres) per year
Increase urban tree canopy coverage by 5 percent (from 35 percent to 40 pecent) in 25 years
Create new tree box standards to allow for better tree growth

Low-Impact Development (LID) Practices

Install approximately 100 rain gardens and 250 rain barrels
Perform 300 downspout connections
Develop lot-level residential stormwater detention/retention through RiverSmart Homes incentive program
Incorporate LID into 24 percent of all District DOT projects
Train federal facilities on new stormwater requirements

Build Green Roofs

Convert 2.5 million square feet to green roofs each year

Stormwater Practices and Pollution Prevention

Implement a program to control discharges from District and federally owned facilities
Strengthen auto repair shop education campaign in Hickey Run (pilot)
Inspect all auto repair shops, laundromats and dry cleaners at least once every five years
Develop and implement a pet waste strategy
Mandate installation and use of pumpout stations at all District marinas
Restore 2.7 miles of Watts and Pope branches
Replace/eliminate 1.5 miles of sewer lines in Watts and Pope branch
Complete a DPW street sweeping study and implement long-term enhanced street sweeping and fine particle removal
Implement and promote new stormwater regulations that require LID construction as a first option and mandate training for site managers
Implement an impervious area-based stormwater fee
Review and update zoning regulations to encourage green building

Point Source Pollution Reduction Actions by 2011

The District of Columbia is implementing the new Blue Plains NPDES permit to install Enhanced Nutrient Removal (ENR) at Blue Plains.

Award contract for design	June 1, 2009
Award contract for construction	December 31, 2011
Place in operation	July 1, 2014
Begin compliance with total nitrogen effluent limit	January 1, 2015

Blue Plains reports the following nutrient reductions (aside from ongoing reductions via the BNR processes for CSOs):

Total nitrogen before any CSO control	123,329 pounds per average year of rain
After completion of nine minimum control projects (May 2009)	70,298 pounds per average year of rain
After completion of first phase of Anacostia CSO Program (2018)	40,000 pounds per average year of rain
After completion of LTCP (2025)	5,300 pounds per average year of rain

Trash TMDL and Trash Removal

The District is developing a Trash Total Maximum Daily Load (TMDL) and implementation Plan for the Anacostia River by December 2010. The District will:

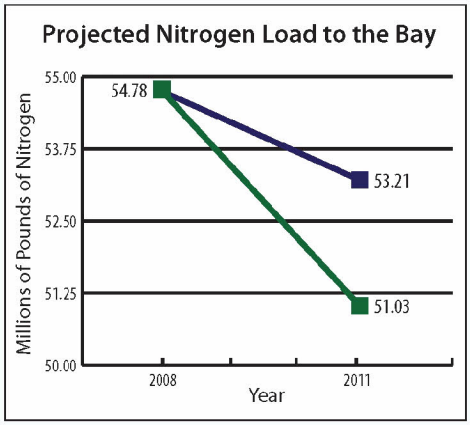
- Retrofit 100 catch basins for trash control in conjunction with enhancements to the District's street sweeping efforts.
- Install 1,000 storm drain markers annually.
- Install litter trap demonstration projects to divert 6,800 pounds of trash by 2011.
- Determine the type of trash control devices that would be the most effective in retaining large debris and sediment in hot-spot areas identified by a trash survey.

For more, contact: Diane Davis, (202) 741-0847, diane.davis2@dc.gov

Maryland
2011 Milestones to Reduce Nitrogen and Phosphorus

Chesapeake Bay Program
A Watershed Partnership

Nitrogen Reduction Milestone

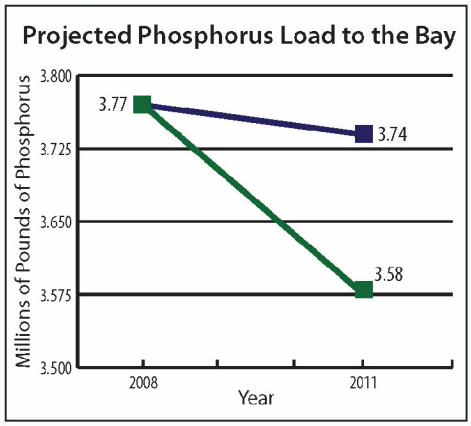


Maryland's 2011 milestone commitment is to reduce nitrogen by 3.75 million pounds by the end of the three-year period (2009-2011).

	Projected*
Reduction at Previous Rate of Progress	1.57M
Pollution Load after Previous Rate of Progress	**53.21M**
Reduction at Milestone Rate of Progress	3.75M
Pollution Load after Milestone Rate of Progress	**51.03M**
Increase in Rate of Progress	**138%**

M = Millions of Pounds of Nitrogen

Phosphorus Reduction Milestone

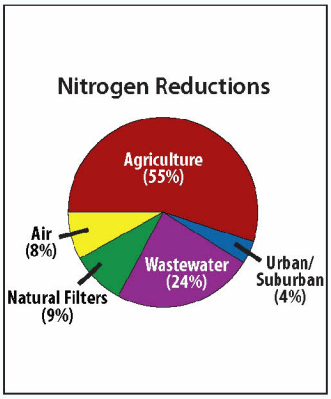


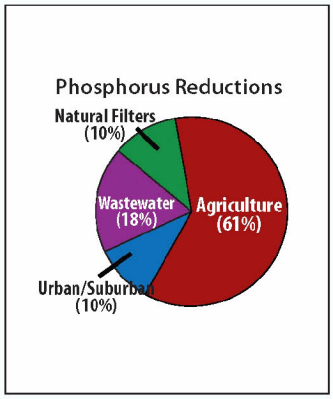
Maryland's 2011 milestone commitment is to reduce phosphorus by 193,000 pounds by the end of the three-year period (2009-2011).

	Projected*
Reduction at Previous Rate of Progress	32,045 lbs.
Pollution Load after Previous Rate of Progress	**3.74M**
Reduction at Milestone Rate of Progress	193,000 lbs.
Pollution Load after Milestone Rate of Progress	**3.58M**
Increase in Rate of Progress	**502%**

M = Millions of Pounds of Phosphorus

Pollution Reductions by Source





Funding During Milestone Period

Bay Restoration Fund	**$590M**
Trust Fund	**$69.6M**
MACS	**$17.8M**
Farm Bill	**$96.6M**
TOTAL	**$774M**

* Nitrogen and phosphorus reductions are based on Phase 4.3 Watershed Model data for agricultural, urban/suburban and air reductions and monitored data for wastewater reductions.

For more, contact: Frank Dawson, (410) 260-8110, fdawson@dnr.state.md.us

Pollution Reduction Actions by End of 2011

Agriculture

Cover Crops	460,000 acres/year
Nutrient Management Plan Enforcement	100,000 acres
Soil Conservation and Water Quality Plans	257,049 acres
Manure Transport	10,000 tons/year
Heavy Use Poultry Area Concrete Pads	400 farms
Livestock Waste Structures	145 structures
Water Control Structures	200 structures
Dairy Manure Incorporation Technology	2,500 acres/year
Stream Protection with Fencing	3,000 acres
Poultry Manure Incorporation Technology	2,500 acres/year
Poultry Waste Structures	53 structures
Stream Protection without Fencing	3,000 acres
Runoff Control Systems	75 systems

Wastewater

Wastewater Treatment Plants ENR	39,000 fewer lbs. P 740,000 fewer lbs. N
Blue Plains BNR Upgrade	190,000 fewer lbs. N

Urban/Suburban

Stormwater Runoff Management Retrofits	90,000 acres
Required septic retrofits (inside Critical Area)	1,080 systems
Voluntary septic retrofits (non-Critical Area)	1,920 systems

Natural Filters - Private Land

Streamside Grass Buffers	7,000 acres
Streamside Forest Buffers	3,000 acres
Wetland Restoration	700 acres
Retire Highly Erodible Land	1,800 acres

Natural Filters - Public Land

Streamside Grass Buffers	1,000 acres
Streamside Forest Buffers	2,100 acres
Wetland Restoration	1,000 acres
Retire Highly Erodible Land	2,000 acres

Air

Maryland Healthy Air Act	305,882 less N

Additional Reduction Options

Agriculture

Increase manure transport program activity exporting poultry litter out of the watershed.
Increase enrollment of dairy and poultry manure incorporation technology beyond 2,500 acres each, annually.
Implement precision agriculture on 100,000 acres.
Implement ammonia emissions reductions at poultry houses.

Urban/Suburban

Require all new and failing septic systems statewide to be replaced with best available technology.
Require 1:1 or 2:1 best available technology septic system offsets for all new septic systems statewide.
Require each acre of new development to be offset by retrofitting two acres of pre-1985 land for stormwater management.
Connect septic systems in targeted watersheds with high septic loads (e.g., Magothy, Severn and South Rivers) to WWTPs where it is cost-effective and where sprawl growth will not be encouraged.

Natural Filters

Substantially increase conversion of state-owned agricultural leases to forests or wetlands.
Increase implementation of streamside buffers on agricultural and suburban lands.

General

Implement Bay Bank and/or other effective nutrient and sediment cap and trade program.
Increase funding for the 2010 Trust Fund as needed.

Assessments of Future Management Actions

Revise nutrient reduction estimates for cover crops to reflect the latest scientific conclusions.
Conduct an independent review of Maryland's nutrient management planning program and consider options to improve effectiveness based on available science.
Conduct nutrient mass balance study to better target and implement BMPs.
Study the feasibility of extending the critical area protective provisions to non-tidal waters.
Evaluate the potential nutrient reduction for wastewater treatment plants using ENR from 4 mg/l limit on each plant to 3 mg/l and the potential sprawl implications of that action.
Create a State Development Plan, as required by Maryland law, to identify changes to State-level programs and policies that could significantly reduce sprawl.

For more, contact: Frank Dawson, (410) 260-8110, fdawson@dnr.state.md.us

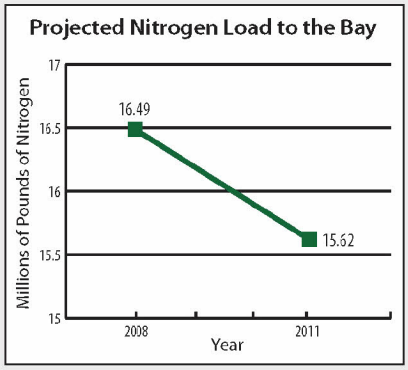
New York

2011 Milestones to Reduce Nitrogen and Phosphorus

Chesapeake Bay Program
A Watershed Partnership

This initial set of 2-yr milestones is based largely on continuing implementation of the New York State Tributary Strategy for Chesapeake Bay Restoration (2007) and our partnership with the Upper Susquehanna Coalition. New York will continue to seek solutions for water resource protection and conservation needs, including wetland restoration and flood damage reduction. New York will also continue to be an aggressive partner in efforts to fully restore the water quality of Chesapeake Bay and the entire watershed basin.

Nitrogen Reduction Milestone

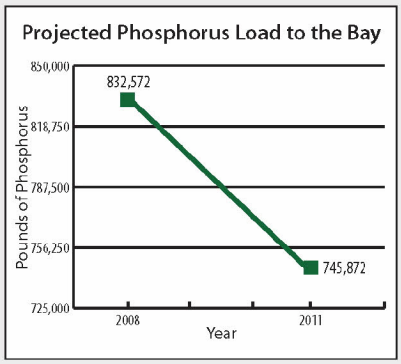


New York's 2011 milestone commitment is to reduce nitrogen by 1,830,000 pounds in New York's portion of the watershed (870,500 pounds as delivered load to tidal waters) by the end of the three-year period (2009-2011). This is a 5 percent reduction from 2008 levels (16.5 million pounds delivered load).

	Projected*
Reduction at Milestone Rate of Progress	**870,500 lbs.**
Pollution Load after Milestone Rate of Progress	**15.62M**

M = Millions of Pounds of Nitrogen

Phosphorus Reduction Milestone

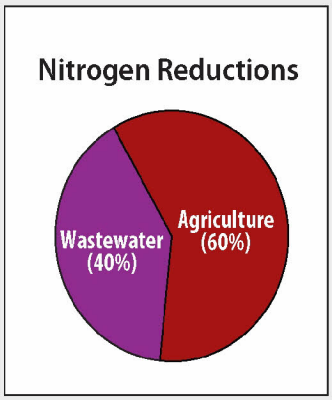


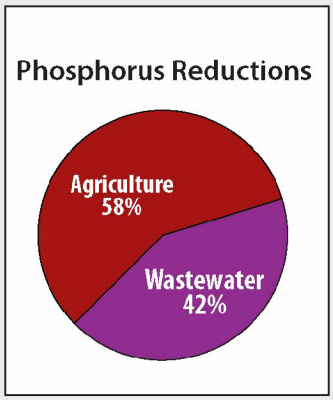
New York's 2011 milestone commitment is to reduce phosphorus by 194,000 pounds in New York's portion of the watershed (86,700 pounds as delivered load to tidal waters) by the end of the three-year period (2009-2011). This is a 10% reduction from 2008 levels (831,000 pounds delivered load).

	Projected*
Reduction at Milestone Rate of Progress	**86,700 lbs.**
Pollution Load after Milestone Rate of Progress	**745,872 lbs.**

M = Millions of Pounds of Phosphorus

Pollution Reductions by Source





Funding During Milestone Period

• Landowner-Funded Implementation Projects and Cost-Share Contributions	$300K
• Soil and Water Conservation Committee Agricultural Non-Point Source Abatement and Control Grant Program Using N.Y. State Environmental Protection Fund	$6M
• N.Y. Ecosystem-Based Management Fund for Buffers	$250K
• USDA NRCS Farm Bill Programs	$4M
• USDA Farm Service Agency Farm Bill Programs (including CRP and CREP)	$50K
• Special Congressional Funds for Agricultural Env. Mgmt. Program Planning and Prescribed Grazing	$2.6M
• CBP Headwater Assistance Grants	$700K
• Special Grants Obtained through RFPs	$800K
• Upper Susquehanna Coalition Stormwater Funding	$500K
TOTAL (beyond base program funds)	**$15.2M**

* Nitrogen and phosphorus reductions are based on Phase 4.3 Watershed Model data for agricultural and urban/suburban reductions and monitored data for wastewater reductions.

For more, contact: Peter Freehafer, (518) 402-8205, pbfreeha@gw.dec.state.ny.us

Pollution Reduction Actions by End of 2011

New York constitutes 10% of the Bay watershed with only 4% of the population, is predominately forested and is an area with high quality waters with essentially no impairments. Effective delivery of existing controls in binding permits and regulatory programs is largely responsible for high quality water in New York. New York has a full suite of well established regulatory permitting and enforcement programs: sewage treatment plants, septic systems, concentrated animal feeding operations (>200 cows), polluted runoff from urbanized areas, and erosion from construction and post-construction controls.

Agriculture

Comprehensive Nutrient Management Plans	38,000 acres
Barnyard Runoff Controls	25,000 animal units
Animal Waste Systems	18,500 animal units
Rotational Grazing	18,700 acres
Stream Protection with Fencing	608,000 feet
Riparian Buffers (Grass and Forest)	5,600 acres
Precision Feeding	7,600 animal units
Wetlands on Agricultural Land	100 acres
Wetlands on Other Land	350 acres
Land Retirement	2,000 acres
Conservation Tillage	3,000 acres
Cover Crops	1,000 acres
Tree Planting	200
Horse Pasture Management	300 acres
Erosion and Sediment Control	150 acres

Urban/Suburban

Full Suite of Post-Construction Controls
Peak Flow Mitigation

Wastewater

Binghamton/Johnson City Nitrogen Removal Upgrade
Optimization of Nutrient Removal at Other 27 Significant Bay Facilities

Air

Power Plants and Major Boilers

- Heightened Regulation and Enforcement
- Enhanced Summer Control Per Ozone Transport Commission NOx Budget Trading Program
- Year-Round Control Per Acid Deposition Reduction Program

Anticipated Additional Reductions

Atmospheric deposition, including agricultural sources, contributes about 30% of the Bay's nitrogen. New York has taken regulatory action to reduce nitrogen oxide emissions and encourages orther jurisdictions to do the same: California car—285,000 tons since 1996 (a 55% reduction); and power plants/major boilers: 82,000 tons since 1995 (a 66% reduction); heightened regulation and enforcement; enhanced summer control per Ozone Transport Commission NOx budget trading program; and year-round control per Acid Deposition Reduction Program.

Ecosystem-Based Watershed Planning: The N.Y. State Dept. of Environmental Conservation (NYSDEC) has initiated development of a comprehensive Susquehanna/Chemung River Basin Action Agenda, focusing on water quality protection, habitat improvement and flood damage reduction. Working with the Upper Susquehanna Coalition and other stakeholders, a draft is expected to be completed in 2010.

Phosphorus Legislation: Governor Paterson has proposed legislation to greatly limit the phosphorus content of non-farm fertilizer and to require low phosphorus content in dishwashing detergent.

NOx Emissions:

- Even more stringent regulatory controls for power plants and industrial boilers as part of the technical re-definition of "reasonably available control technology" for NOx.
- Additional NOx reductions from cement kilns, glass manufacturers and asphalt plants.
- Carbon offsets accomplished through implementation of the Regional Greenhouse Gas Initiative, like carbon sequestration from afforestation and methane emissions avoided from agricultural manure management operations.
- Governor Paterson announced a program to meet 45 percent of New York's current energy needs by 2015 via renewable energy sources and energy efficiency.

Regional Water Quality Planning: NYSDEC will soon announce the availability of funds for proposals that promote regional comprehensive water quality management planning activities. The American Recovery and Reinvestment Act provides New York with $1.7 million for planning activities associated with green infrastructure, TMDLs, phase II stormwater for MS4s, and water quality management.

Upper Susquehanna Wetland Program: Nearly 1,000 new wetland acres since 2005; program is continuing.

Compliance Assurance and Enforcement: The NYSDEC Water Integrated Compliance Strategy System has established criteria for identifying and responding to priority violations against the state's water resources.

Land Protection: About 300,000 acres of forested land in New York is permanetly protected. The state's goal is to increase protection to an additional 5,800 acres by 2012 and 15,000 acres by 2020.

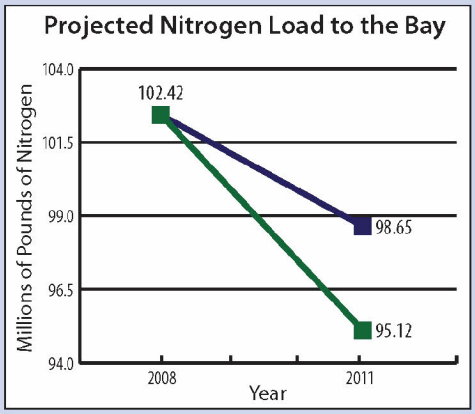
For more, contact: Peter Freehafer, (518) 402-8205, pbfreeha@gw.dec.state.ny.us

Pennsylvania

2011 Milestones to Reduce Nitrogen and Phosphorus

Chesapeake Bay Program
A Watershed Partnership

Nitrogen Reduction Milestone

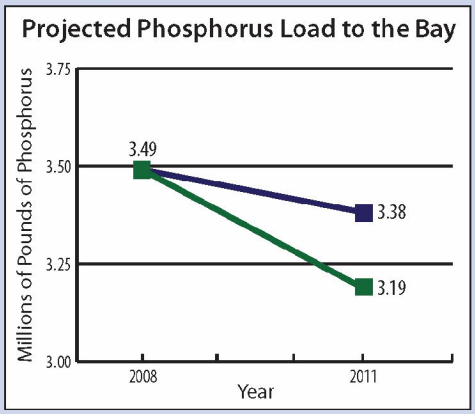


Pennsylvania's 2011 milestone commitment is to reduce nitrogen by 7.3 million pounds over the three year period (2009-2011).

	Projected*
Reduction at Previous Rate of Progress	3.78M
Pollution Load after Previous Rate of Progress	**98.65M**
Reduction at Milestone Rate of Progress	7.30M
Pollution Load after Milestone Rate of Progress	**95.12M**
Increase in Rate of Progress	**93%**

M = Millions of Pounds of Nitrogen

Phosphorus Reduction Milestone

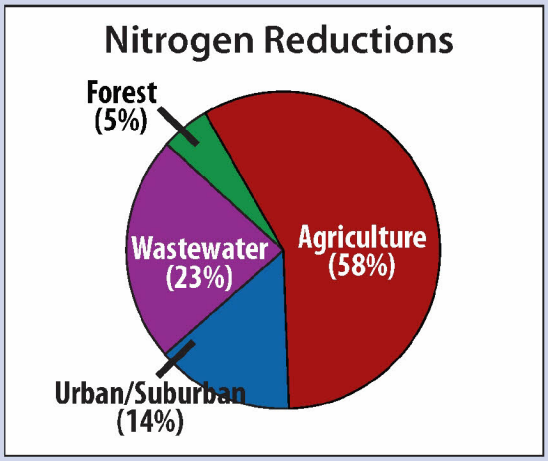


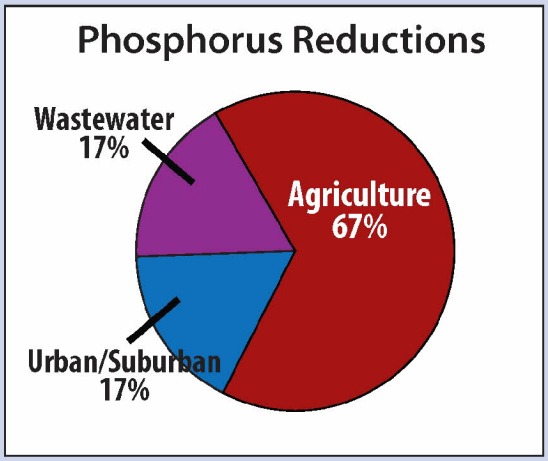
Pennsylvania's 2011 milestone commitment is to reduce phosphorus by 300,000 pounds over the three year period (2009-2011).

	Projected*
Reduction at Previous Rate of Progress	116,000 lbs.
Pollution Load after Previous Rate of Progress	**3.38M**
Reduction at Milestone Rate of Progress	300,000 lbs.
Pollution Load after Milestone Rate of Progress	**3.19M**
Increase in Rate of Progress	**159%**

M = Millions of Pounds of Phosphorus

Pollution Reductions by Source





* Nitrogen and phosphorus reductions are based on Phase 4.3 Watershed Model data for agricultural, urban/suburban and air reductions and monitored data for wastewater reductions.

For more, contact: Kenn Pattison, (717) 772-5652, kpattison@state.pa.us

FY 2008-2009 Funding

Pennsylvania Department of Environmental Protection (DEP)

Nutrient Management Delegation Agreements	$1,749,000
Conservation District Fund Allocation Program	$2,065,320
Chesapeake Bay Implementation Grant State Match Plus	$3,410,000
PA Stormwater Planning and Management (Act 167)	$2,200,000
Growing Greener Watershed Protection Grant Program	$13,512,087

Pennsylvania State Conservation Commission (SCC)

Dirt and Gravel Road Maintenance Program	$2,441,000
Nutrient Management Program	$2,301,000
Conservation District Fund Allocation Program	$1,091,600
NRCS Engineering Assistance for BMP installation	$64,000
Commercial Manure Hauler and Broker Certification Program	$89,400
Resource Enhancement and Protection Program (REAP)	$8,450,000

Pennsylvania Infrastructure Investment Authority (PENNVEST)

Loans and grants for wastewater projects	$30,078,120
TOTAL	**$67,451,527**

Pollution Reduction Actions by End of 2011

Abandoned Mine Reclamation	2,219 acres	Nutrient Management	473,801 acres
Animal Waste Management Systems	275 units	Off-Stream Watering with Fencing	6,143 acres
Carbon Sequestration/Alternative Crops	25,740 acres	Off-Stream Watering w/ Fencing & Rotational Grazing	21,249 acres
Conservation Plans/SCWQA	327,599 acres	Off-Stream Watering without Fencing	7,335 acres
Continuous No-Till	86,567 acres	Other Conservation Tillage	88,924 acres
Cover Crops (late planting)	174,818 acres	Poultry Litter Transport Out of Watershed	55,659 tons
Dirt and Gravel Road Erosion and Sediment Control	124,913 feet	Poultry Litter Transport Into Watershed	3,256 fewer tons
Enhanced Nutrient Management	450 acres	Poultry Phytase	19,626 pounds P
Erosion and Sediment Control	181 acres	Septic Connections	7,353
Forest Buffers (all land uses)	19,059 acres	Tree Planting	15,065 acres
Forest Harvesting Practices	125 acres	SWM Practices	8,690 acres
Grass Buffers	1,161 acres	Urban Stream Restoration	4,400 feet
Land Retirement	58,876 acres	Wetlands	1,548 acres
Mortality Composters	22 units	Heavy Truck Anti-Idling Rule	9.78M fewer hours
Non-Urban Stream Restoration	215,088 feet	Wastewater Treatment Plant Nutrient Reduction	40 plants

Additional Reduction Options

Erosion and Sediment Control Regulations

- Codification of post-contruction stormwater requirements
- Mandatory riparian forest buffers for exceptional value waters
- Conservation Plan revision to include animal heavy use areas

Stormwater Management Planning Act expansion to provide for Integrated Water Resource Planning

Legacy Sediment BMP Development and Implementation

Phosphate Dishwasher Detergent Ban

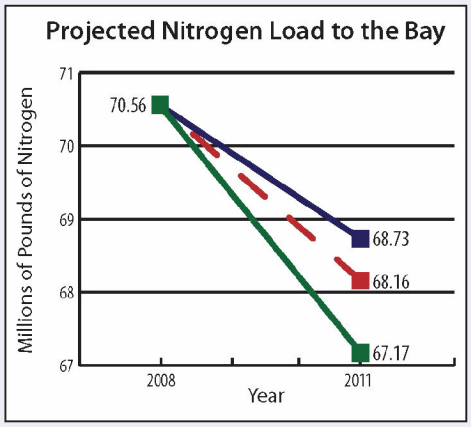
For more, contact: Kenn Pattison, (717) 772-5652, kpattison@state.pa.us

Virginia

2011 Milestones to Reduce Nitrogen and Phosphorus

Chesapeake Bay Program
A Watershed Partnership

Nitrogen Reduction Milestone



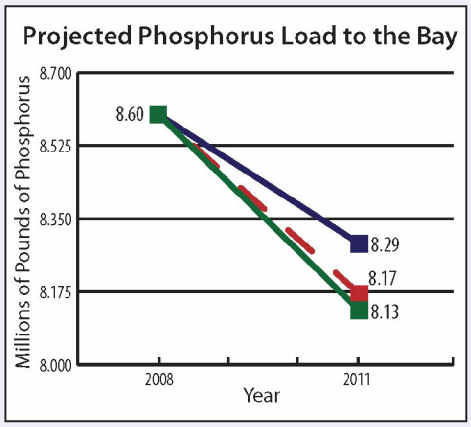
Virginia's 2011 milestone commitment is to reduce nitrogen by 3.39 million pounds over the three year period (2009-2011).

	Projected**
Reduction at Previous Rate of Progress	1.83M
Pollution Load after Previous Rate of Progress	68.73M
Reduction after Recent Nutrient Reduction Actions	2.40M
Pollution Load after Recent Nutrient Reduction Actions*	68.16M
Reduction at Milestone Rate of Progress	3.39M
Pollution Load after Milestone Rate of Progress	67.17M
Increase in Rate of Progress	86%

M = Millions of Pounds of Nitrogen

* Based on the current rate of progress, Virginia will fall 990,000 pounds short of its milestone to reduce 3.39 million pounds of nitrogen. To address this shortfall, Virginia will explore additional pollution reduction options (see back).

Phosphorus Reduction Milestone



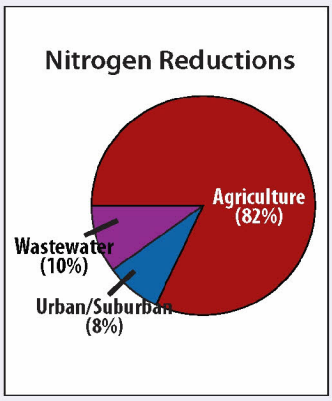
Virginia's 2011 milestone commitment is to reduce phosphorus by 470,000 pounds over the three year period (2009-2011).

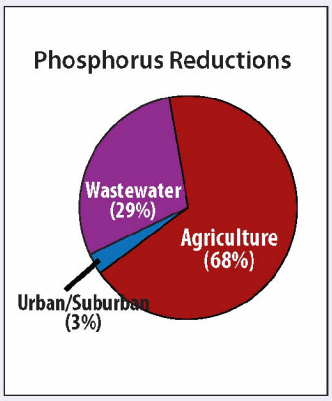
	Projected**
Reduction at Previous Rate of Progress	308,953 lbs.
Pollution Load after Previous Rate of Progress	8.29M
Reduction after Recent Nutrient Reduction Actions	435,000 lbs.
Pollution Load after Recent Nutrient Reduction Actions*	8.17M
Reduction at Milestone Rate of Progress	470,000 lbs.
Pollution Load after Milestone Rate of Progress	8.13M
Increase in Rate of Progress	52%

M = Millions of Pounds of Phosphorus

* Based on the current rate of progress, Virginia will fall 35,000 pounds short of its milestone to reduce 470,000 pounds of phosphorus. To address this shortfall, Virginia will explore additional pollution reduction options (see back).

Pollution Reductions by Source





Funding During Milestone Period

Farm Bill	$38M
Natural Resources Commitment Fund	$26M
Water Quality Improvement Funding Nonpoint Source Program	$35M
Virginia Agricultural BMP Tax Credit Incentives	$1.2M
Water Quality Improvement Funding Point Source Program	$627M
Virginia Clean Water Pollution Control Revolving Loan Fund	$456M
Grant Funding	$12M
TOTAL	**$1,195,200,000**

** Nitrogen and phosphorus reductions are based on Phase 4.3 Watershed Model data for agricultural, urban/suburban and air reductions and monitored data for wastewater reductions.

For more, contact: Sara Benghauser, (804) 786-0044, sara.benghauser@governor.virginia.gov

Recent Nutrient Reduction Actions

Significant funding and programs recently established over the last several years are in place to reduce 2.4 million pounds of nitrogen and 435,000 pounds of phosphorus by 2011.

These actions include:

1. $61 million in funding for agricultural conservation practices in the Bay watershed.
2. $1.08 billion in grants and loans for nutrient removal technologies at sewage treatment plant upgrades to meet and maintain pollution caps.
3. Agreements with poultry companies to achieve a 30 percent phosphorus reduction in poultry litter.
4. Acceleration of landowner participation in the Conservation Reserve and Enhancement Program (CREP).
5. Significantly increased compliance with erosion and sediment control requirements.
6. Developent of aggressive stormwater control regulations.
7. Revision of poultry waste management regulations to address off-site nutrient management.

To meet the 2011 milestone, additional actions will be needed to achieve further nitrogen and phosphorus reductions -- 995,500 pounds and 35,000 pounds, respectively.

Pollution Reduction Actions by End of 2011

Agriculture

Cover Crops	119,000 acres/year
Small Grain Commodities (harvestable)	38,000 acres/year
Agricultural Nutrient Management	258,000 new acres
Conservation Tillage (NRCS)	47,500 acres/year
Continuous No-Till (State Cost-Share)	81,000 acres
Animal Waste Management Systems	241 systems
Runoff Control AWMS	32 systems
Off-stream Watering with Fencing	89,500 acres
Forest Buffers	10,000 acres
Grass Buffers	2,000 acres
Wetland Restoration	36 acres
Retirement of Highly Erodible Land	19,000 acres
Reforestation	12,500 acres
Agricultural Stream Restoration	13,000 linear feet

Urban/Suburban

Stormwater Management BMPs	49,000 acres
Erosion and Sediment Control	61,000 acres
Additional Urban Nutrient Management	133,000 acres
Septic System BMPs	806 systems

Wastewater

233,000 Pounds Nitrogen Reduced
126,000 Pounds Phosphorus Reduced

Additional Reduction Options Needed to Meet Milestone Commitment

Specific actions to achieve additional nutrient pollution reductions will be a priority of Governor Kaine as he develops his biennial budget and legislative agenda. Further details will be available in late 2009.

Additional options for consideration will include funding, policies or programs designed to further encourage pollution reductions from agricultural lands, developed lands and air sources.

Virginia's five priority agricultural conservation practices have been, and will continue to be, a focus for additional nutrient pollution reductions.

- Nutrient Management Planning
- Cover Crops
- Conservation Tillage
- Riparian Buffers
- Livestock Exclusion

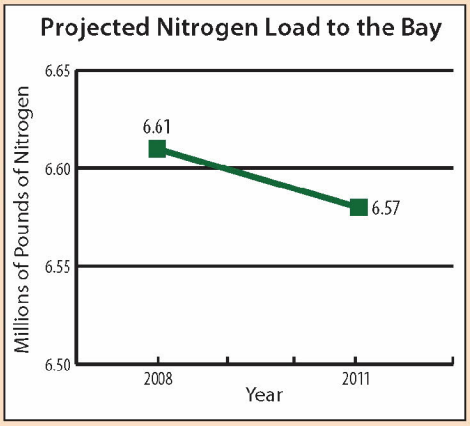
For more, contact: Sara Benghauser, (804) 786-0044, sara.benghauser@governor.virginia.gov

West Virginia

2011 Milestones to Reduce Nitrogen and Phosphorus

Chesapeake Bay Program
A Watershed Partnership

Nitrogen Reduction Milestone

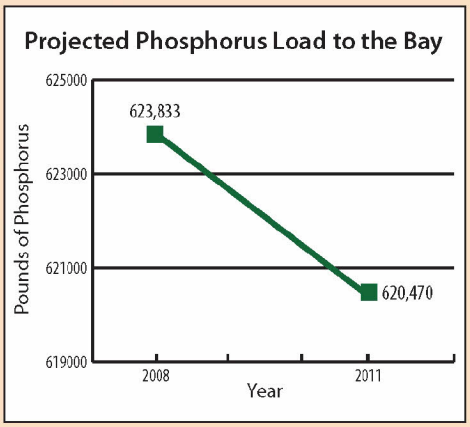


West Virginia's 2011 milestone commitment is to reduce nitrogen by 42,254 pounds by the end of the three-year period (2009-2011).

	Projected*
Reduction at Milestone Rate of Progress	42,254 lbs.
Pollution Load after Milestone Rate of Progress	6.57M

M = Millions of Pounds of Nitrogen

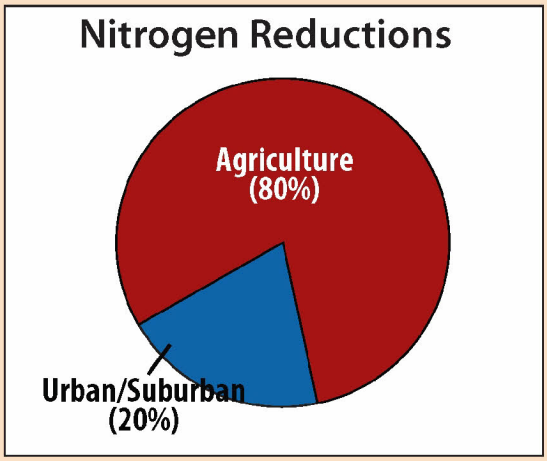
Phosphorus Reduction Milestone

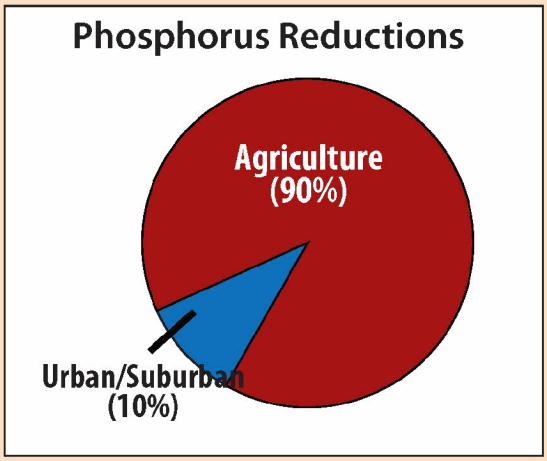


West Virginia's 2011 milestone is to reduce phosphorus by 3,364 pounds by the end of the three-year period (2009-2011).

	Projected*
Reduction at Milestone Rate of Progress	3,364 lbs.
Pollution Load after Milestone Rate of Progress	620,470 lbs.

Pollution Reductions by Source





* Nitrogen and phosphorus reductions are based on Phase 4.3 Watershed Model data for agriculture, urban/suburban and air reductions and monitored data for wastewater reductions.

For more, contact: Teresa Koon, (304) 926-0499, teresa.m.koon@wv.gov

Funding During Milestone Period

USDA Farm Bill Programs	$2,600,000
West Virginia State Revolving Loan Fund	$7,250,000
West Virginia Infrastructure, Jobs and Development Council	$9,249,751
Section 319 Nonpoint Source Program	$1,124,633
Local 319 Match	$749,756
Chesapeake Bay Grant	$1,000,000
TOTAL	**$21,974,140**

Pollution Reduction Actions by End of 2011

The state of West Virginia plans to develop a nutrient trading/offset program initially focused on the Potomac River drainage and the state's obligation for reducing nutrients into the Chesapeake Bay.

- A guidance document with policies and procedures will be developed and finalized in 2009.
- Recommendations for funding the infrastructure necessary to implement the tranding program -- approximately $500,000 -- will be developed and submitted to the appropriate funding authorities in 2010.
- With adequate funding, the trading program will be in operation by 2011.

West Virginia will implement the following specific implementation goals by the end of 2011:

Off-Stream Watering with Fencing and Rotational Grazing	14,000 acres	Animal Waste Management Systems	11 systems
Cover Crops	1,500 acres/year	Wet Ponds and Wetlands	500 acres drained
Forest Buffers	200 acres	Dry Extended Detention Ponds	500 acres drained
Grass Buffers	200 acres	Urban Filtering Practices	50 acres drained
Manure Transfer	14,000 tons	Erosion and sediment control	1,400 acres
Wetland Restoration	5 acres	Septic connections	364 systems
Non-Urban Stream Restoration	4,000 feet	Septic pumping	6,800 systems
		Septic denitrification	2 systems

For more, contact: Teresa Koon, (304) 926-0499, teresa.m.koon@wv.gov

APPENDIX 12

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 3 2004

OFFICE OF
WATER

MEMORANDUM

SUBJECT: **Annual Permit Limits for Nitrogen and Phosphorus for Permits Designed to Protect Chesapeake Bay and its tidal tributaries from Excess Nutrient Loading under the National Pollutant Discharge Elimination System**

FROM: James A. Hanlon, Director
Office of Wastewater Management

TO: Jon Capacasa, Director
Water Permits Division, EPA Region

Rebecca Hanmer, Director
Chesapeake Bay Program Office

This memo responds to your proposal to use National Pollutant Discharge Elimination System (NPDES) permit effluent limits for nitrogen and phosphorus expressed as an annual limit in lieu of daily maximum, weekly average, or monthly average effluent limitations, for the protection of Chesapeake Bay and its tidal tributaries from excess nutrient loading. Based on the information provided by your staff and for the reasons and under the circumstances outlined herein, I concur that permit limits expressed as an annual limit are appropriate and that it is reasonable in this case to conclude that it is "impracticable" to express permit effluent limitations as daily maximum, weekly average, or monthly average effluent limitations. This memo describes the scientific and policy rationales that support this approach.

EPA Region 3 has developed recommended water quality criteria for certain parameters designed to protect water quality in Chesapeake Bay and its tidal tributaries.[1] The main cause of water quality impairment for these parameters in the main stem of the Bay is loading of nutrients, specifically nitrogen and phosphorus, from point and nonpoint sources throughout the entire Chesapeake Bay watershed. The States are in the

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[1] See EPA's Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll for the Chesapeake Bay and Its Tidal Tributaries, April 2003. "Chesapeake Bay and its tidal tributaries" is the portion of the Chesapeake Bay watershed subject to the ebb and flow of ocean tides. This area encompasses all of the mainstem Bay and the area north and east to the fall line. The fall line is a physical barrier on the Bay's larger tributaries marked by waterfalls and rapids.

process of adopting revised water quality standards based on EPA Region 3's recommended water quality criteria and developing wasteload allocations for point sources discharging to the Chesapeake Bay watershed that are designed to protect water quality in Chesapeake Bay and its tidal tributaries from excess nutrient loading.

Establishing appropriate permit limits that implement nitrogen and phosphorus wasteload allocations for discharges that cause, have the reasonable potential to cause, or contribute to excursions of water quality criteria for Chesapeake Bay and its tidal tributaries is different from setting limits for other parameters such as toxic pollutants because: the exposure period of concern for nutrients loadings to Chesapeake Bay and its tidal tributaries is very long; the area of concern is far-field (as opposed to the immediate vicinity of the discharge); and the average pollutant load rather than the maximum pollutant load is of concern. Thus, developing appropriate effluent limitations requires innovative implementation procedures.

Applicablility

Your proposal addresses implementation of wasteload allocations for nitrogen and phosphorus designed to achieve compliance with water quality standards of Chesapeake Bay. Your proposal and the rationale discussed in this memorandum are not intended to address wasteload allocations to meet other water quality standards in areas outside of Chesapeake Bay and its tidal tributaries. Smaller scales such as embayments and smaller tributaries than the major Eastern and Western shore rivers were not examined and therefore the rationale in this memorandum does not address and may not apply to the protection of these smaller scale situations.

This rationale also does not apply to parameters other than nitrogen and phosphorus that may exhibit an oxygen demand to waters of the Bay. Such parameters include dissolved oxygen, biochemical oxygen demand, and ammonia.

Of course, all local water quality standards apply and must be met when evaluating appropriate point source permit effluent limits. States are developing water quality standards for nutrients to be applied to local waters as stand-alone criteria. In any case where the nutrient wasteload allocations for protection of water quality in a river, tributary, or other part of Chesapeake Bay are expressed on a shorter term basis, i.e., seasonal, monthly, weekly or daily values, the permit limits that derive from and comply with the wasteload allocation expressed on such shorter term basis must be used. Shorter averaging periods might be appropriate and necessary to protect against local nutrient impacts in rivers or streams in the basin.

Additionally, it is important to note that the nutrient dynamics of the Bay may not be unique. The establishment of an annual limit with a similar finding of "impracticability" pursuant to 40 CFR 122.45(d) may be appropriate for the implementation of nutrient criteria in other watersheds when: attainment of the criteria is dependent on long-term average loadings rather than short-term maximum loadings; the

circumstances match those outlined in this memo for Chesapeake Bay and its tidal tributaries; annual limits are technically supportable with robust data and modeling as they are in the Chesapeake Bay context; and appropriate safeguards to protect all other applicable water quality standards are employed.

Why are annual loadings appropriate for wasteload allocations for nutrients for Chesapeake Bay and its tidal tributaries?

The nutrient dynamics of Chesapeake Bay and its tidal tributaries are complex. Unlike toxics and many conventional pollutants that have a direct and somewhat immediate effect on the aquatic system, nutrients have no direct effect, but instead are "processed" in several discreet steps in the Bay ecosystem before they have their full effect. Each processing "step" further delays and buffers the time between the time of nutrient discharge in an effluent and the resultant nutrient effect on the receiving waterbody.[2] Chesapeake Bay and its tidal tributaries' biological and physical processes can be viewed as "integrating" variations of nutrient load magnitude over time. The integration of nutrient loads from all sources over time ameliorates intraannual load fluctuations from individual sources, with the Bay responding to overall loads on an annual scale, while showing little response to monthly variations within an annual load.[3]

EPA has conducted complex modeling of the effect of nutrient loading to the Bay specifically from individual point source discharges.[4] Based on the results of the model, EPA concluded that Chesapeake Bay and its tidal tributaries in effect integrate variable point source monthly loads over time, so that as long as a particular annual total load of nitrogen and phosphorus is met, constant or variable *intraannual* load variation from individual point sources has no effect on water quality of the main bay.[5]

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[2] More specifically, nutrients are taken up by algae throughout the year, and once taken up, settle to the bottom to decay in the warmer summer waters, contributing to summer anoxia/hypoxia. Thus, summer anoxia is the result of organics, primarily from algal deposition, which accumulates throughout the year, with peak algal biomass generated in the bloom of early spring, and that these organics are stored in Chesapeake Bay and tidal tributary sediments throughout the year and between years.

[3] The seasonal build-up of the volume of hypoxic water in the deep channel results from the integration of effects of microbial metabolism acting over long time scales. With respect to the Chesepeake Bay, Boynton et al. stated "... the coupling between nutrient loading, water column production of organic matter, and recycling of nutrient from sediments occurs over time scales of about several years or less."

[4] The complex movement of water within Chesapeake Bay and its tidal tributaries, particularly the density-driven vertical estuarine stratification, is simulated with a Chesapeake Bay hydrodynamic model of more than 13,000 cells. The Water Quality Model is linked to the hydrodynamic model and uses complex nonlinear equations describing 26 variables of relevance to the simulation of dissolved oxygen, water clarity and chlorophyll *a*. Coupled with the Water Quality Model are simulations of settling organic material into and upon the sediments and its subsequent decay and flux of inorganic nutrients from the sediment, as well as a coupled simulation of underwater Bay grasses in the shallows.

[5] The Water Quality Model was used to examine the differences between a constant monthly load and a variable monthly load, but each at the same annual load levels. For nitrogen, the constant monthly discharge estimate is based on a scenario that assumes the level of point source loads based on a constant 5 mg/l discharge applied against point source flow. The variable load scenario is based on the records of 54 sewage treatment plants (STPs) that discharge to Chesapeake Bay that have complete monthly records. The Total Nitrogen average concentration for each month was calculated and then converted to a concentration

Based on the model, EPA and the affected States are developing "tributary strategies" that will assign wasteload allocations expressed as annual loads for the point source dischargers to the Bay and it tributaries that achieve the water quality standards of Chesapeake Bay and its tidal tributaries.[6]

Why is it impracticable to express limits for nutrients on a daily, weekly or monthly basis?

The NPDES regulations at 40 CFR 122.45(d) require that all permit limits be expressed, unless impracticable, as both average monthly limits and maximum daily limits for all dischargers other than publicly owned treatment works (POTWs), and as average weekly limits and average monthly limits for POTWs.

The Office of Wastewater Mangement cautions that the steady-state statistical procedures described in EPA's *Technical Support Document for Water Quality-based Toxics Control*[7] (TSD) are not applicable or appropriate for developing nutrient limits for the main stem of Chesapeake Bay and its tribal tributaries. Developing permit limits for nutrients affecting Chesapeake Bay and its tidal tributaries is different from setting limits for toxic pollutants because the exposure period of concern for nutrients is longer than one month, and can be up to a few years, and the average exposure rather than the maximum exposure is of concern. The statistical derivation procedure described in the TSD for acute and chronic aquatic life protection is not applicable to exposure periods more than 30 days (see TSD page 105). If the procedures described in the TSD for aquatic life protection (i.e., criteria with 1-day and 4-day averaging periods) were used for developing permit limits for nutrients (with much longer averaging periods), both the maximum daily limit or the average weekly limit (as appropriate) and average monthly limit would be less stringent than the wasteload allocation necessary to protect the criteria. Thus, even if a facility was discharging in compliance with permit limits calculated using these procedures, it would be possible to constantly exceed the wasteload allocation. Such an approach clearly is unacceptable.

The TSD in Section 5.4.4 provides guidance for establishing daily and monthly effluent limits for human health protection based on long term exposure periods. However, this approach is also not appropriate for deriving permit limits for nutrients. This is because this TSD procedure is a steady-state approach that assumes that the

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that would be at the same annual loads as the constant 5 mg/l case, but still preserve the observed monthly variations. Monthly changes in flow were also taken into account. The variation in monthly concentrations varied from a low of 3.76 mg/l in August to a high of 8.46 mg/l in January. The derived monthly variation, equivalent on an annual basis to the constant 5 mg/l monthly loads was applied to all point source dischargers in the Chesapeake Bay watershed. Water quality results of the two scenarios were indistinguishable, no difference was seen in the achievement of Chesapeake Bay water quality criteria. A similar analysis was performed for phosphorus and the same conclusion was reached.

[6] The "tributary strategies" determine appropriate load and wasteload allocation designed to achieve water quality standards for the Chesapeake Bay and its tidal tributaries. The analysis is similar in scope to what EPA would expect in a TMDL.

[7] Document reference EPA/505/2-90-001, March 1991.

distribution of effluent load is constant. However, the efficiency of treatment of nutrients by biological nutrient removal is highly sensitive to ambient temperature and is not effective at lower temperatures. Thus, the effluent loading of nutrients is not constant due to seasonal temperature fluctuations in northern climates. Even a simple steady-state model for permit development such as dividing the annual limit by 12 and establishing that value as the monthly limit is therefore, not appropriate. Such a limit does not account for seasonal fluctuations in effluent loading. To establish appropriate weekly or monthly limitations, due to the effect of temperature on treatment efficiency for nutrients, the permitting authority would need to be able to predict with some accuracy the expected annual temperature over that time frame, which is virtually impossible to do given the normal temperature variability in any given week or month.[8] Because of the effect of temperature on the treatment efficiency and the normal variation in ambient temperature over shorter time periods, it is impracticable to develop appropriate daily, weekly or monthly limits for nutrients that are protective of the wasteload allocation expressed as an annual load.

Thus, we conclude that due to the characteristics of nutrient loading and its effects on the water quality in Chesapeake Bay and its tidal tributaries and because the derivation of *appropriate* daily, weekly or monthly limits is not possible for the reasons described above, that it is therefore "impracticable" to express permit effluent limitations as daily maximum, weekly average, or monthly average effluent limitations.

Recommendations for implementing an annual limit

The permit should state the method for determining compliance with the annual limit. When expressing an effluent limit as an annual value, it is recommended that the permit provide the ability to assess compliance at interim dates.[9]

The frequency of compliance monitoring should also be specified in the permit. The Office of Wastewater Management recommends that the effluent discharge volume should be monitored continuously. Nutrient monitoring should be specified on at least a weekly basis, and the monthly mass load should be summarized based on the total flow during the month and reported as a monthly load.

cc: Water Management Division Directors, Regions 1-10
NPDES Branch Chiefs, Regions 1-10
Mark Pollins
Susan Lepow

[8] For example, the National Weather Service reported that for Baltimore, MD the month of November 2003 was one of the warmest on record, the first three weeks of December 2003 were "decidedly cold," followed by a last 10 days of the month that were "unseasonably warm," however, the annual average temperature for 2003 at the same weather station was within 1°C of the annual norm.

[9] Permit compliance is regularly determined on a monthly basis, and Discharge Monitoring Reports are prepared and submitted on a monthly basis.